

5
PUBLIC HEALTH ACT.

(11 & 12 Vict., Cap. 63.)

REPORT

TO THE

GENERAL BOARD OF HEALTH,

ON A

PRELIMINARY INQUIRY

INTO THE SEWERAGE, DRAINAGE, AND SUPPLY OF
WATER, AND THE SANITARY CONDITION
OF THE INHABITANTS

OF THE BOROUGH OF

MORPETH,

AND THE VILLAGE OF

BEDLINGTON.

By ROBERT RAWLINSON, Esq., C.E.,

SUPERINTENDING INSPECTOR.



LONDON :

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FOR HER MAJESTY'S STATIONERY OFFICE.

1849.

NOTIFICATION.

THE General Board of Health hereby give notice, in terms of section 91 of the Public Health Act, that on or before the 1st February, 1851, written statements may be forwarded to the Board with respect to any matter contained in or omitted from the accompanying Report on the Sewerage, Drainage, and Supply of Water, and the Sanitary Condition of the Inhabitants of the Borough of MORFETH, and Parish of BEDLINGTON, or with respect to any amendment to be proposed therein.

By order of the Board,
HENRY AUSTIN, *Secretary.*

*Gwydyr House, Whitehall,
19th December, 1849.*

The Plans are to face page 26.

PUBLIC HEALTH ACT (11 and 12 Vict., cap. 63).

Report to the General Board of Health on a Preliminary Inquiry into the Sewerage, Drainage, and Supply of Water, and the Sanitary Condition of the Inhabitants of the Borough of MORPETH, and the Village of BEDLINGTON, in the County of Northumberland. By ROBERT RAWLINSON, Esq., Civil Engineer, Superintending Inspector.

MY LORDS AND GENTLEMEN,

October, 1849.

A PETITION from more than one-tenth of the rated inhabitants of the borough of Morpeth having been forwarded to your honourable Board, praying “the General Board of Health to direct a Superintending Inspector to visit the said borough, and to make inquiry and examination with respect thereto, with a view to the application of the said Act, according to the provisions of the said Act, in that behalf,” signed by William Trotter, Mayor, and 86 other rate-payers, the present population being about 3,441. On the 17th day of October, 1849, I entered upon the inquiry, at 11 o'clock in the forenoon, at the Town Hall, Morpeth, due notice having been given, as the Act directs, of which the Town Clerk furnished proof.

There were present at the commencement of the inquiry—William Trotter, Esq., Mayor, the Hon. and Rev. F. R. Grey, rector of Morpeth; Alderman Thew; Councillors Jobling, Charlton, Nicholson, Thompson, and Hood; the Rev. S. B. Maughan, curate of Hebron; the Rev. J. Anderson, Presbyterian minister; the Rev. — Ayre, Independent minister; A. R. Fenwick, Esq., agent for the Right Hon. the Earl of Carlisle; Robert Hawdon, Esq., surgeon of Morpeth; Matthew Brumell, Esq., surgeon; George Brumell, Esq., solicitor, and clerk to the Board of Guardians; William Woodman, Esq., Town Clerk, and others. The Mayor opened the Court by stating,—“that a petition had been forwarded from the town, soliciting that an Inspector should be sent down to receive evidence and inquire into the state and condition of the town and district. That such Inspector was now present to hear evidence, to make inquiry, and report to the General Board of Health accordingly.” I conducted the inquiry with reference to the entire Parliamentary borough, and held an adjourned meeting in the village of Bedlington, as set forth in the report on that village and district hereto appended.

Many advantages will arise to the inhabitants of the district by the application of the Act to the entire Parliamentary borough. The several hamlets and villages will have the advantage of good government at the least possible expense, the Public Health Act having been framed for this especial purpose.

The rates leviable under the Public Health Act are, first, public rates, and, second, private rates.

The general district rate may be levied over the whole or part of a district (ss. 87, 89). Arable, meadow, pasture, and wood-land, market-gardens and nursery-grounds, land covered with water, canals and towing-paths, and land used as a railway, to be assessed upon one-fourth only (s. 88). The general district rate will consist of the expenses of preliminary inquiry, salaries, &c., of local officers and servants, and certain casual expenses; and all such expenses of executing the Act as are not defrayed by means of any other rate, or out of the district fund account (see s. 87). The district fund account will consist of the proceeds arising from the sale of sewage, &c., penalties recoverable by the local Board, and certain other miscellaneous sums received by them.

Special District Rates (s. 86).—Special district rates will be for making, enlarging, altering, or covering sewers (s. 89). This rate will be levied upon either the whole or part of a district, according to circumstances. But those persons only will be liable whose property has been benefited by the expenses in respect of which the rate is made (s. 86).

Water Rate (s. 93).—This rate will be levied for water supplied for the purposes of domestic use, cleanliness, and house drainage (s. 93). Property to be assessed,—the premises supplied (s. 93).

The rates for public and private improvements may be spread over any period not exceeding 30 years, but must be so distributed as to pay off the expenses in respect of which the rate is made, together with interest at 5*l.* per cent., within that period (s. 90).

EXISTING BOUNDARIES.—The Parliamentary borough of Morpeth comprises the following townships:

Names of Townships.	Area.			Rateable Value.	Popula- tion. 1841.
	Statute Acres.	Roods.	Perches.		
Morpeth	573	3	15	£. s. d. 6,141 6 6	3,441
Buller's Green	100	..	..	347 12 6	169
Newminster Abbey	717	2	10	1,630 15 0	107
Morpeth Castle, Stobhill, and Catch-burn	1,491	..	15	4,344 16 0	145
Tranwell and High Church	1,220	..	9	1,557 3 0	55
Hepscott	1,594	3	24	2,049 18 0	183
Bedlington	8,910	..	..	13,131 15 0	3,155
Total Acres	14,607	1	3	29,203 6 0	7,255

The extreme length east and west is about 8½ miles, by 4¼ miles extreme breadth north and south; and the whole area is about 26 miles in circumference.

NUMBER of HOUSES and TENEMENTS, with their Annual Rental.

MORPETH.

	Number of Tenements and Houses.	Value.		
		£.	s.	d.
Tenements under £2 10s.	206	385	0	0
Houses above £2 10s., and under £5 . .	131	436	15	0
" £5 " £10 . .	113	729	7	0
" £10 " £20 . .	118	1,565	10	0
" £20 " £30 . .	46	1,067	4	0
" £30 " £40 . .	15	490	14	0
" £40 " £50 . .	1	47	10	0
" £50 " £60 . .	1	50	0	0
" £60 " £70 . .	..	..	..	..
" £70	1	80	0	0
Land . . . . .	..	724	15	0
Tithes . . . . .	..	70	16	0
Manufactories. . . . .	..	766	13	0
Total	632	6,414	4	0

BULLER'S GREEN.

	Number.	Value.		
		£.	s.	d.
Tenements under £2 10s.	28	61	5	0
Houses above £2 10s., and under £5 . .	4	23	10	0
" £5 " £10 . .	7	45	0	0
" £10 " £20 . .	4	51	0	0
" £20 " £30 . .	1	21	10	0
" £30	1	30	0	0
Land . . . . .	..	75	2	6
Manufactories. . . . .	..	..	..	..
Total	45	307	7	6
Total of Morpeth	632	6,414	4	0
Total houses and tenements, with their annual rental, in Morpeth and Buller's Green	677	6,721	11	6

The municipal borough includes all the township of Morpeth (except Cottingwood), and a very small part of the township of Newminster Abbey. The Parliamentary borough is bounded on the north by the river Wansbeck, on the east by the German Ocean, on the south by the river Blyth, and on the west by the parish of Mitford, as shown on the accompanying map.

To William Woodman, Esq., Town Clerk of Morpeth, I am most largely indebted for a vast amount of information as to the past and present state and condition of the town and district. I also received much valuable assistance from Mr. Fenwick, agent to the Earl of Carlisle; and, in arranging for the proposed site of the new water-works, Mr. J. Moore, agent to William Ord,

Esq., M.P., most readily gave his consent to allow the necessary sections to be taken for the proposed reservoir.

MORPETH.—A market-town and borough, returning, since the Reform Act, one member to Parliament, is situated on the east coast of England, about five miles westward from the German Ocean, 291 miles north and west from London, but by railway 321 $\frac{3}{4}$ miles, and 108 $\frac{1}{4}$ miles by railway from Edinburgh. The present member for Morpeth is Captain the Hon. Edward Howard, R.N. The market day is Wednesday, when a considerable quantity of corn, and lean cattle and sheep are sold; previous to the opening of the railway it was one of the largest cattle markets in England. Since this time the market for fat stock has been removed to Newcastle-upon-Tyne. The early history of Morpeth is lost in the dark mists of antiquity. The probability is, that as a village it was inhabited long before the Conquest. In old writings the name is variously spelled, as *Morepath*; and sometimes it occurs in the Latinized form, *Morpathia*—the town *on the path over the moor*. William the Norman, after the Conquest, gave a grant of Morpeth to one of his followers, William de Merlay, whose descendants were lords of Morpeth until the family merged in the Greystocks, Dacres, and the Howards, the present barons of Morpeth. Arms were granted to the town during the reign of Edward VI., in the year 1552; they have the appropriate motto of

INTER SYLVAS ET FLUMINA HABITANS.

By the kindness of the Town Clerk I have been enabled to append to this Report a copy of the deed conferring the grant of arms. It proves that from the earliest date a kind and benevolent feeling existed with the barons of Morpeth towards the townspeople, which happily has been continued.

“To all and singular as well kinges heraldes and offycers of armes as nobles, gentyllmen, and others, which these presentes shall see or here. I, Wyllm Hervy, esquyere, otherwyse called Norrey principall herald and kinge of armes of the northie partyes of this realme of Englonde, sendyth these comēdaçōns and gretynge: Foreasmoch as aunciently frome the begynnyng the renowne of auncient cetys and townes corporate hathe bene comendyd to the worlde by the good decertes and laudable acts and customes of the inhabytants of the same, amonge the which I the sayde Norey kinge of armes notte specyally at this presente the good worshipfull and well-dysposed psones the baylyffs and burgesses of the towne of Morpathe, in the countye of Northumberlonde, hath well and worshipfully gnyded and behaved themselves in all humble obedyence towarde the king's ma^e from the begynnyng, whereby they have well meryted and decerved to receyve the signes and tokens in shylds called armes. In conyderaçōn whereof, at the gentell request of the sayde baylyffs

PARLIAMENTARY BOROUGH

OF

MORPETH.

Shewing the Area proposed to be brought within the operation of the Public Health Act.



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and burgesses, I have assigned unto them armes and blason mete and conveyent for a further demonstraçon and declaraçon of theyr honest behavoure and demenure towarde theyre prince and cuntry. And further havynge knowlege of credyble psones of theyre first foundaçon I could nott w^owt grett injury of theyre fyrst fownder, the noble and valyaunt knyght Sir Roger de Marlay, assigne unto them any other armes then a pcell of his armes for a ppetuall memory of his good wyll and benevolence towarde the sayde towne so well begon and so longe contynued which were to his prejudyce to have it forgotten and brought into oblyvyon. In consideraçon whereof, I the sayde Norrey kynge of armes in maner and forme abovesayde by power and auctoryte of my offyce annexed and grawnted by the kings majestes letters patente under his gret seale have geven and graunted ratyfyed and conformed unto the sayde baylyffs and burgesses of the towne of Morpath, in the countye of Northumbrelond, and to theyre successours for eũmore, the olde and auncient armes of the sayde Sir Roger Marlaye, thereon a castell golde for the augmentaçon for a further declaraçon of theyre worshipfull behavoure and good decerts, so well begone and longe contynued, as more playnly aperyth by the pecture thereof in this ñgent; to have & to holde to the sayde baylyffs and burgesses of ye towne of Morpathe & to their successours, and they it to use & enjoye to theyre worshypes for evermore w^t out impedymnt, lett or interupeyon of any pson. In wytnes whereof I the said Norrey kynge of armes have signed these presente w^t my hande, and sett thereunto the seale of my offyce, and the seale of my armes. Geven the vv^{ti} day of Maye, in anno dni 1552, and in the yere of our soveraigne lorde Edward VIth by the grace of God kynge of Englonde, France, & Irelonde, defender of the fayth, and in yerthe under Criste of Englonde and Irelonde the supreamed hedd the sixth yere."

Signed þ me Wiffm Hervy,
Ats Norrey Reg. armes.

Two seals pendant.

The manor and the corporation have always been connected, and to this day freemen are made and their rights regulated from bye-laws framed and drawn up by *Lord William Howard*—the celebrated BELTED WILL, who did more for the advancement of civilization on the borders than any baron of that period. As Warden of the Western Marches he repressed with rigour the excesses of his day. Distinguished as he was for his martial character and love of justice; his literary habits and tastes, and the industry and energy with which he pursued them were still more remarkable for the period in which he lived; and his strong, bold, easy writing is familiar to the antiquary. It is to be regretted that no one has yet been found to do justice to his

character, and illustrate the state of society at the period in which his name was a watchword on the borders. Sir Walter Scott has spoken of him in his *Border Minstrelsy*, where he states "Belted Will Howard is marching here," &c. His marching was not, however, to burn, destroy, and plunder; but to vindicate the laws in force, and to repress and punish crime. He was probably the most extraordinary man of that period; besides "keeping the border" he wrote much, and frequently signed himself "WILL HOWARD."

SITUATION OF THE TOWN.—Morpeth has the advantage of a site most favourable to health, and which is by nature very beautiful. The river Wansbeck forms a bend round the west, south, and east sides of the town. The back of the town from the north is also washed by Cotting-Burn, which falls into the river to the east.

Of Morpeth, Leland quaintly wrote,—

"Wansbeke, a praty ryver, rynnithe throge the syde of the towne.

"The towne is longe and metely well buylded with low howsys, the stretes pavyd. It is far fayrer towne then Alenwike."

The valley in which the town stands opens to the south-east and north-west, through which a current of air is constantly flowing, adding very much to the healthiness of the district. Seen from some situations the whole valley seems to be land-locked by hills rising to an apparent uniform level of about one hundred feet elevation. On the south of the town and river are the Castle Banks and Ha Hill, with the ruins of the old castle, to this day bearing on the gateway front the visible impress of Montrose's artillery. To the north is Cottingwood, fringed with plantations; to the north-west are Newminster, or Grange-house Banks, wooded from their summits down to the river's edge. To the east is Chapel Wood, and to the south-east Quarry Wood. The site of the old castle has been favourably chosen, being a narrow strip of elevated land, having a deep natural valley to the north and south. The entrance gateway (the only portion now standing, except some of the yard walls), fronting the brow of the hill to the east, and an artificial moat, gave protection towards the west. The river flows betwixt the castle and the town, and Mr. Woodman stated that, generally, the castles in the north were placed south of the rivers, so as to have this natural barrier betwixt them and the incursive Scotch.

The castle site commands and overlooks the river and the town, as also the whole of the valley, and few prospects are more beautiful. The town is tolerably compact, and, as seen from the Castle-hill in October, harmonizes with the rich tints of the autumn foliage. The red-tile roofs of the houses are relieved with a mixture of blue and grey slates, the white stone spire of the Catholic chapel rises prominently out to the west, and the dark

massive roof of St. James's church occupies a considerable space in the extreme north. The sloping banks of the valley are richly wooded in many parts, and in autumn the dark green of the oak, and the more sombre shade of the Scotch fir, are contrasted with the light and delicate green of the ash. These are relieved by the rich tints of the beech, ranging from light yellow to a deep crimson brown, with every intermediate shade of colour betwixt these extremes. The willow, with its silver-lined leaf, droops over the winding river. To the west of the town, in a small valley, stood Newminster Abbey, founded by Roger De Merlay, for the Cistercian Monks, in 1138. The archway of the north door of the conventual now alone remains above ground; all else is covered beneath rugged and unequal mounds of a green mossy sod—huge graves of past grandeur; scarce a stone remains in sight, the ruins having served the townspeople as a quarry, from which to abstract material for their cottages, during many years. A few fine ash trees, isolated, or in pairs, now grow above and within the ruined walls, striking their roots through the floors of the church, cloisters, chapter-house, and grave-yard. The mighty dead rest in peace; the solemn organ peals here no more; the clustered pillars, the many-ribbed arches, and the vaulted ceilings, are for ever prostrate; the costly prayers and purchased intercessions have been concluded, though the bargain was "for all time." The richly stained and painted window dims not the light of heaven with its strangely blended imagery of saint and warrior—emblems of heavenly peace, and emblems of earthly violence and blood. In the words of the Rev. John Hodgson, the historian of Northumberland, to whose valuable pages I have referred for information respecting the district—

"The keepers of the tombs and the servants of God have long been driven from their sanctuary, and the destroying hands of time and man have levelled its altars and towers with the earth. But the changes we lament are often the origin of new and better orders of things; subterraneous fires, and the ceaseless motion and varying temperature of air and water, are daily causing catastrophes to man, which keep the world in perpetual growth; and improvements in civilized life rise upon the ruins of institutions that were once considered models of perfection."

At present the town is, in some measure, crowded upon itself, but as facility is now offered for building in the outskirts, this evil may in future be avoided. There are few more beautiful sites for villas than in the neighbourhood of Morpeth, where there is every facility for good drainage, a most beautiful prospect in wood and water, and perfect freedom for ventilation.

The following remarks on the town are by Mr. William Woodman, a gentleman thoroughly acquainted with all connected with the past and present history of Morpeth, and who is wishful for such improvement as shall advance the health and well being of the inhabitants:—

"One great bar to the advancement of the town, even subsequent to

the union of the two crowns of England and Scotland, must have been its situation in a border county, where it was not only exposed to the continual inroads of the Scots, but to the depredations of barbarous neighbours, who, despising the arts of peace, placed their sole dependence upon plunder. Whole parishes were occupied by reputed thieves, among whom 'the king's writ did not run,' as no legal messenger dared to venture among them.

"The town was without walls, and the gates, which were placed at the ends of the streets, would offer feeble barriers to such depredators. So great was the influence of this state of manners, that since the middle of the 16th century land in Northumberland has increased in value far beyond that in other parts of England; land in the neighbourhood of Morpeth is now two hundred times its value in 1550, and is worth seven times the rental in 1715.

"The staple manufactures of the town were the woollen and tanning; the former is well nigh extinct, and of the latter there are now but four tan-yards remaining. The town was long known as the seat of the largest market in England for cattle and sheep, except Smithfield, all the thickly-populated districts of the Tyne and Wear being supplied entirely, and the manufacturing towns of Yorkshire partially from it; but this market has been almost entirely removed since 1845, when an extensive railway communication having been completed to Newcastle, all parties found it a more convenient place. A considerable quantity of stock was brought there by the steam-boats from Scotland, and by the railway from the western coast. The buyers had in the railways a cheap and rapid mode of reaching Newcastle, and conveying their purchases, hence both seller and buyer naturally and properly gave that place the preference.

"The most ancient part of the town is that which extends from a little below the bridge, in a straight line, towards the west, until it reaches the river. The street from the market-place to the north was built in the 13th century. In the 17th century, the skeleton of the town was the same as now, and those streets and houses which are in the angle formed by Bridge-street and Newgate-street, have all been built during the present century, prior to which there were no buildings there except a number of tan-yards by the side of Cotting-Burn.

"The greatest prosperity of the town was from the 12th to the 16th century, since which it has been stationary, if not retrograding.

"The present prospects of the town are very encouraging. There is now no select body, but the corporation includes all, and possess a considerable fund, which they no longer employ in feasting and drinking, but on objects of general utility and improvement. The adjoining land is not now let to persons ignorant of its management, the former motives for keeping it unoccupied by buildings having ceased to exist, and the owners with enlightened and liberal views are ready and willing to dispose of plots for building purposes, which not only the present residents in the town, but persons whose business is at more distant places, will avail themselves of, as the great trunk railway which passes the town places it within half an hour of Newcastle. There were lately several properties in the town, the owners of which did not esteem them worth repairing, but had permitted to fall into decay. All these have been repaired, with one or two exceptions, and during the last months many persons who wished to reside in the town were unable to find houses. There is now every opportunity for advancement, and it requires but the encouragement to be found in good sanitary regulations, in ample

supplies of water, and in the improvement of the morals and habits of the people.

“The place has not now, and is not likely to have, those periods of excitement and extraordinary speculation which are to be found in the seats of the great staple manufactures; it is preserved from those seasons of depression and misery to which such places are subject.”

GEOLOGICAL CHARACTER OF DISTRICT.—*Morpeth* stands upon the lower beds of the carboniferous formation, the principal characteristics of which are quartzose grits, with shales, coal, ironstone, &c. The town is to the northern and western extremity of the Great Newcastle coal-field. Like the principal portion of Great Britain, the whole surface of the country has been shaped and contoured by the moulding action of water; the stratified rocks have been covered by a water-washed “drift,” or diluvial deposit varying in character and depth. This superficial covering consists of boulders, gravel, sand, clay, marl, and bog; not laid in any regularly defined order, but mixed in varying proportions. That part on which the town stands has about two or three feet of soil, below which is a bed of very tenacious blue clay, in some parts 20 feet in depth. On the south side of the river where the gaol has been erected there is no clay, but a great depth of gravel and sand, showing the former action of water. At *Cottingwood* a good bed of clay is worked for bricks and tiles; this clay is found to be singularly free from lime, and may be used with great advantage for the manufacture of tiles of all descriptions, for purposes of town drainage, as for land drainage. There are several quarries of sandstone in the neighbourhood. Those from which the stone for the castle and church was taken, at *Catch Burn* and *Clifton*, being about two miles distant. This stone is coarse in grain, contains much quartz, and has stood the weather very well. The district furnishes most that is requisite for building cheaply.

The land of the district has generally a stiff clay soil, but much of it has been improved by deep drainage.

The average rental of the land over the whole county is said to be about 5s. per statute acre. But it varies in price from 3*l.* to 50s. near the town, and is so low as 1s. each acre on the moor lands, which are principally let for sheep-farms where the cheviot generally, and a few black-faced sheep are fed.

The following sections will show the character of the subsoil and strata in and near the town.

Section of Strata North-East of the Town.

	Ft.	In.		Ft.	In.
Soil	1	6	Metal	5	6
Sand	8	0	Saggar clay	2	6
Clay mixed with moss	3	6	Yellow freestone post	24	0
Freestone post	5	0			
Clay	1	0	Total	51	0

The following are the strata about 600 yards further east on the opposite side of a whin dyke which crosses the valley from north-west to south-east.

	Ft.	In.
Soil	2	0
Sand	2	0
Gravel	2	9
Clay	3	3
Thill	20	6
Coal	1	6
Total	32	0

CORPORATION.—The governing body of the Corporation consists of four aldermen and 12 councillors, one of whom is annually appointed mayor; four councillors are elected each year by the burgesses; two aldermen are elected every three years by the Council; consequently the councillors hold office for three years, the aldermen for six.

There is no Local Act of Parliament in force in the town; but the Corporation have made bye-laws, of which the following is a copy:—

“BOROUGH OF MORPETH, }
To wit. }

“At a quarterly meeting of the Council of the Borough of Morpeth, in the County of Northumberland, holden on the ninth day of November in the year one thousand eight hundred and forty-one; at which meeting at least two-thirds of the whole number of the said Council are present, that is to say:—

The Mayor.

Aldermen:—
A. R. Fenwick,
Thomas Bowman,
Thomas Bowser, and
Joseph Thew

Councillors—
John Creighton,
Anthony Charlton,
George Hood,
James Thompson,
Thomas Jobling,
Peter Blair,
R. D. Burn, and
Thomas Hopper.

“It is ordered and ordained by the said Council, and we the said Council do hereby order and ordain and make such bye-laws as are hereinafter mentioned and set forth, for the good rule and government of the said borough, to commence and take effect from the twenty-fifth day of December next:—

“I. That if any person, in the course of emptying any pigsty or privy; or removing any night-soil, offal, putrid meat or fish, carrion, blood, dung, manure, or other offensive matter or thing, within the said borough, shall wilfully or negligently lay any of the said offensive matters or things, or suffer the same to remain in any of the streets, courts, highways, alleys, or public passages or places, within the said borough; every person so offending shall, for each such offence, forfeit and pay a fine

or sum not exceeding two pounds ; provided always that this bye-law shall not extend to any dung, manure, ashes, or other matters or things deposited for the purpose of removal, if the same be removed and the place on which the same shall have been deposited be effectually cleansed within five hours after every such deposit.

“ II. That if any person, on any day of the week (save Wednesday), shall place or leave, or permit to be placed or left any coach, omnibus, chariot, gig, waggon, timber carriage, dray, cart, sledge, truck, wheel-barrow or hand-barrow, or other carriage, *save the waggons, carts and wains, of common carriers and of persons not resident in the said borough*, in any of the streets, courts, highways, alleys, or public passages or places within the said borough ; or shall suffer the same to remain in any of the places aforesaid, beyond a reasonable time for loading and unloading goods, and taking up and setting down passengers ; every person so offending shall, for each such offence, forfeit and pay a fine or sum not exceeding two pounds.

“ III. That if any person shall on Wednesdays, place or leave, or suffer to remain, any coach, omnibus, chariot, gig, waggon, timber carriage, dray, cart, sledge, truck, wheel-barrow, hand-barrow, or other carriage, in any of the streets, courts, highways, alleys, or public passages or places within the said borough, which, by order of the Council, shall from time to time be prohibited from being so used on Wednesday ; or if any person shall permit or suffer the waggon, cart, or wain of any common carrier, or of any person not resident within the said borough, to stand or remain in such public places as aforesaid, longer than shall be necessary to load or unload such waggon, cart, or wain, or feed and refresh the horses drawing the same ; every person so offending shall for each such offence forfeit and pay a fine or sum not exceeding two pounds ; provided always that such last-mentioned waggons, carts, and wains, during the time they are loading or unloading, or the horses drawing the same are feeding, shall be so placed as to leave sufficient space for the passage of carriages, horses, and foot passengers.

“ IV. That if any person shall throw, deposit, place, or leave, or permit or suffer to run or flow any night-soil, offal, putrid meat or fish, entrails of fish, carrion, dead animals, blood, dung, manure, oyster-shells, bones, broken glass, china or earthenware, dust, ashes, refuse of vegetables or fruits, dirty water, or other offensive matter or thing, so as to occasion any nuisance or annoyance, into or upon any street, court, highway, alley, footpath, or public place or passage within the said borough, or shall place, lay or deposit, any bricks, stones, lime, rubbish, or dirt in or upon the same ; every person so offending shall for each such offence forfeit and pay a fine or sum not exceeding two pounds ; provided always that no person shall be liable to a penalty for throwing, depositing, placing, or leaving any sand, ashes, or other materials, in the time of frost upon any footpath to prevent accidents ; or any litter or other proper materials upon any footpath or public street in case of sickness to prevent noise ; or for throwing, depositing, placing, or leaving any bricks, stones, lime, materials, rubbish or dirt, used in or occasioned by the building or repairing of any house or building in and upon any footpath, public street, or highway, so as a sufficient space be left for the passage of carriages, horses, and foot passengers, and a light be kept burning near the same during the night, and so as such bricks, stones, lime, material, rubbish and dirt, and also such sand, ashes, litter and materials shall be removed by the

party placing the same as soon as conveniently may be after the necessity for placing or continuing the same shall have ceased.

“ V. That if any person shall sift, screen, or slake any lime in any public passage or place within the said borough ; every person so offending shall, for each such offence, forfeit and pay a fine or sum not exceeding one pound.

“ VI. That if any person shall throw, deposit, place, or leave or permit or suffer to run, or flow, or accumulate, any night-soil, offal, putrid meat or fish, entrails of fish, carrion, dead animals, blood, dung, manure, bones, refuse of vegetables, stagnant water, or other offensive matter or thing in any place within the said borough, whether open or covered, and whether surrounded by a wall, or other fence, or not, so as to be a nuisance ; every person so offending shall for each such offence, forfeit and pay a fine or sum not exceeding five pounds.

“ VII. That if any person, after nine o'clock in the morning, shall shake, beat, or dust any carpet, mat, or furniture, in any of the streets, courts, highways, alleys or public passages or places within the said borough, or from or at any door or window opening into the same ; or shall at any time roll, drive, drag or carry, on any public footpath, any waggon, cart, wheel-barrow, hand-barrow, truck, ladder, or long piece of timber, iron or stone, or any sacks or bags of corn, flour, or soot, carcasses or parts of carcasses of animals, furniture, scythes, axes, saws, or other edge tools, burthens carried by two or more persons, or burthens suspended on both sides of the carrier ; or ride or drive on any public footway any horses or cattle (save only such cattle as shall be standing for sale on the market day) ; or shall wilfully damage any public footway ; or shall break or injure any lamp, lamp-post, or gas-pipe ; or shall place upon, or project over or upon any public footway, any awning which shall impede the passengers, or hang out goods for sale or exhibition so as to project over any public footway or carriageway and to obstruct the passengers ; or shall fly any kite, or slide, or skate ; or shall hoop, burn, wash, or scald, any cask ; or empty any cask, barrel, tub, or other vessel ; or shall make any bonfire ; or set off fire-works, or use fire-arms ; or play at football, bowls, or any other game in or upon any of the said streets, courts, highways, alleys, or public passages or places ; or shall hang out any linen, or cloth or wearing apparel, or fish, fruit, butcher's meat, or any other article or thing at the outside of any house, shop, or warehouse, or at any window, door, or balcony, so as to interfere with the free passage along and upon any of the said streets, courts, highways, alleys, or public passages or places ; or shall wilfully break any glass panes in any window ; or shall burn any effigy ; or disturb the public peace ; or, in any way, excite or join in any brawl or in the said borough ; or shall do any act, or make use of any words or language in any public place calculated to provoke a breach of the peace ; or shall loiter or remain in any footway or public place, so as to obstruct the free passage along the same, without some reasonable excuse, after having been required by a constable or police officer to move on ; or shall throw or place any offensive matter on or into any stream of water, or in or into any public or private well, tub, pipe, or pump, or any public or private pond, or pool of water, or reservoir for water ; or shall do or cause to be done any injury, damage, or nuisance in or to any public walk, or to any tree, plantation, shrubbery, hedge, post, rail, pale, fence, gate, stile, or scat, near any public walk ; or cause or commit any other

obstruction, nuisance, or annoyance in any of the streets, courts, highways, alleys, public passages or places; every person so offending shall for each such offence forfeit and pay a fine or sum not exceeding three pounds.

“ VIII. That if any person shall permit or suffer to be at large in any street, court, highway, alley, public passage or place within the said borough, any ferocious dog or bitch, not being sufficiently muzzled; or if any person, after public notice given by the mayor of the said borough, or any two justices of the peace, directing dogs to be confined on suspicion or for fear of canine madness, shall, during the time specified in such notice, permit or suffer any dog or bitch, to go at large in any street, court, highway, alley, or public place or passage; every person so offending shall for every such offence forfeit and pay a fine or sum not exceeding two pounds.

“ IX. That if any person, in any of the said streets, courts, highways, alleys, or public passages or places, shall have or leave any cellar, vault, coal-hole, or underground apartment, without a sufficient door, window, grate, stone, plate, board or other sufficient covering, or shall negligently leave open or unfixed after sunset any such door, window, grate, stone, plate, board, or covering, every person so offending shall for every such offence forfeit and pay a fine or sum not exceeding two pounds.

“ X. That if any person shall paste or affix on or against any dwelling-house, shop, warehouse, building, wall, pillar, lamp-post, or other post within the said borough, any posting-bill, or other paper, after notice from the owner or occupier of such house, shop, warehouse, building, wall, pillar, or post, not to paste or affix anything thereon, or after any such notice shall be painted, printed, or written, on such house, shop, warehouse, building, wall, pillar or post, by means of chalk, paint, or any other material; every person so offending shall for every such offence forfeit and pay a fine or sum not exceeding one pound.

“ XI. That if any person, in any part of the said borough, shall wilfully and indecently expose his or her person, every person so offending shall for every such offence forfeit and pay a fine or sum not exceeding five pounds nor less than two pounds.

“ XII. That if any person shall exhibit, show, sell, or distribute any obscene or indecent print, drawing, painting, representation, ballad, pamphlet or book, in writing or print, within the said borough; or shall inscribe, affix, or write any obscene or indecent figure, representation, word, or words, upon any wall, door, window, pillar, post, or other public place within the said borough, every person so offending shall for every such offence forfeit and pay a fine or sum not exceeding five pounds.

“ XIII. That if any person, in any of the streets, courts, highways, alleys, or public passages, or any other place within the said borough, shall cause any dogs to fight, or abet any dog fight, or bait or abet the baiting of any bull, bear, badger, or other animal; every person so offending shall for every such offence forfeit and pay a fine or sum not exceeding two pounds.

“ XIV. That if any beast, ass, swine, or other cattle shall be found straying or wandering about any of the streets, courts, highways, alleys, or public passages and places within the said borough; or if any horse shall be going in such places without being controlled by a bridle or

halter, so as to endanger the life or limb of any passenger, the owner or owners thereof, or the person having care of the same, shall for such offence forfeit and pay a fine or sum not exceeding one pound.

“XV. That every inhabitant or occupier of a tenement of or in the said borough shall cleanse, amend, and repair, all such footpaths as shall adjoin his or her house or tenement, and also such portions of the common channel as shall adjoin such footpaths, and also all such private drains, gutters or sewers belonging to his or her house or tenement as communicate with any of the common sewers, or with any channel or gutter passing upon, across, over or under any of the streets, courts, alleys, or public passages or places within the said borough; provided always that where a dwelling-house or other tenement or building shall be occupied by several occupiers, that the person who shall occupy the ground-floor shall cleanse and amend or repair that part of the street and channel which shall be adjoining to the premises he or she occupies; and that where any house, building, or tenement, shall be unoccupied, the owner thereof shall be liable to cleanse, amend, and repair such footpaths, channels and drains as aforesaid; and every person so offending against this bye-law shall forfeit and pay a sum not exceeding five pounds.

“XVI. That if any person, when called upon, shall refuse or neglect to go to the assistance of any constable or police-officer to apprehend or convey to prison any person, or to quell any riot or disturbance within the said borough; every person so offending shall forfeit and pay for every such offence a fine or sum not exceeding five pounds.

“XVII. That if any person shall wilfully throw or cast from the roof or any other part of any house or other building into any of the streets, courts, alleys, highways, or public passages or places within the said borough, any slate, brick, wood, snow, rubbish or other material, every person so offending shall for every such offence forfeit and pay a fine or sum not exceeding one pound.

“XVIII. That every councillor elected to the office of mayor of this borough, who shall not accept office, shall pay to the mayor, aldermen, and burgesses thereof the fine or sum of ten pounds.

“XIX. That every person, duly qualified, who shall be elected to the office of alderman, councillor, auditor, or assessor of this borough, and who shall not accept such office, shall pay to the said mayor, aldermen, and burgesses, the fine or sum of five pounds.

“That all former and other bye-laws of the said borough shall be and are hereby repealed.”

These bye-laws have during the last twelve months been enforced, especially clauses 1, 4, 6, and 15. A local sanitary committee has regularly inspected the town, and nuisances have been removed. To this active and intelligent inspection the absence of disease must, in a great measure, be attributed.

LOCAL TAXES.—The only local rates and taxes in Morpeth are the ordinary ones of highway-rates, church-rates, and poor-rates.

The highway-rates are about 3*d.* in the pound, and the church-rates seldom more than 3*d.* The following Table shows the amount of poor-rate for some time past:—

A LIST OF POOR'S RATES.

Year ending 25th March,	1790	£.	s.	d.
	1790	350	15	6 $\frac{3}{4}$
„	1800	723	8	6 $\frac{1}{2}$
„	1810	961	4	6
„	1811	1,203	18	4 $\frac{1}{2}$
„	1812	1,500	18	10 $\frac{1}{2}$
„	1813	1,445	10	3 $\frac{1}{4}$
„	1814	1,995	4	10
„	1815	1,595	13	5
„	1816	1,510	18	7
„	1817	1,581	9	6
„	1818	2,204	19	11
„	1819	1,721	15	1
„	1820	1,442	7	2
„	1830	1,340	5	11
„	1840	1,396	6	0
„	1841	1,684	7	0
„	1842	1,421	17	0
„	1843	1,474	10	0
„	1844	1,580	14	0
„	1845	1,526	14	0
„	1846	1,482	9	0
„	1847	1,699	11	0
„	1848	1,733	5	0

There has never been any borough-rate, the Corporation from their own funds defraying all ordinary expenses, as well as many others. The accompanying Report gives the amount of the Corporation revenue and its application.

“ FINANCE COMMITTEE.—REPORT, 9th November, 1846.

“ *To the Council of the Borough of Morpeth.*

“ In presenting our annual Report, we think we may usefully review the financial affairs of the Corporation, from the first appointment of the Council to the present period.

“ The Council were first elected in 1836: in that year the revenue of the Corporation was 248*l.* 19*s.* 8*d.*, in the year just expired it was 808*l.* 15*s.* 9*d.*

“ The entire expenditure may be classed under the following heads, viz.:—

	£.	s.	d.
Taxes	110	1	9
Police	263	10	5 $\frac{1}{2}$
Lighting	582	10	9 $\frac{1}{2}$
Repairs	362	9	2
Schools	1,731	4	8
Interest	517	17	4
Principal	650	0	0
Salaries	111	6	0
Common	1,095	2	10
Flagging	552	9	10

“ Whether regard is had to the receipts or expenditure, each will be found to furnish grounds of congratulation, alike to the Council and their constituents. The extraordinary increase in the borough fund is most satisfactory, as it holds out a prospect of many public improvements when the present debt of the Corporation is discharged. This increase has been principally occasioned by the possession of the Common, and the management of that property; and whatever may have been the apprehensions of the free-brothers, either as to their being deprived altogether of the pasturage, or of that pasturage being deteriorated, we believe the experience of a few years has entirely dissipated these apprehensions. At the same time we must impress upon the Council that, in our opinion, a larger revenue may and ought to be derived from the Common, as it was on account of that property, and to preserve from ruin some of the freemen who have an interest in it, that a large portion of the present debt was contracted. And from our own observation we are satisfied more land was last year reserved for the free-brothers than was required.

“ The annual expenditure for police has been only about 24*l.*, the remainder of the money required for that purpose having been raised by subscription, which we recommend to be dispensed with so soon as the debt is paid off. We are quite satisfied that the police arrangements are sufficient in ordinary circumstances.

“ The lighting has cost 53*l.* per annum, and is one of the greatest improvements to the borough, as all classes feel the benefit of it.

	£.	s.	d.
Out of the borough fund the Council has expended for education	1,731	4	8
And from the Government grant and subscriptions	368	3	6
	<hr/>		
Making a total of	£2,099	8	2
	<hr/>		

“ The pupils admitted to the schools supported by this expenditure are—

To the infant school	65	l.
To the girls' school	512	
To the English department of Edward VIth's school	483	
	<hr/>	
Total	1,646	
	<hr/>	

So that no less than 1,646 children, during 10 years, have received instruction at these schools; the good of which we are assured will soon be seen in the increased intelligence and improved moral character of the rising generation; many of whom, from the knowledge they have there acquired, will add materially to the comforts and happiness of the station of life in which they are placed, or be enabled to raise themselves to a superior class to what they would have occupied without that education.

“ There is no object to which the attention of the Council has been directed, of which they have so much reason to be proud as of their efforts to promote education. In their schools the instruction is of the most useful practical character. None are excluded from their walls, be their creed what it may; the principles upon which they have been

founded have merited and received the approval of our venerable and enlightened diocesan, and of every nonconforming minister in the borough; and some of the most distinguished clergy in the Established Church, and their public organs are now advocating the institution, by Government, of schools in every part of England, upon principles the same as 10 years ago were taken for the guidance of yours. And after the experience of some years it is most gratifying to observe the estimation in which the schools are held by those for whom they were intended, and that they have so fully answered the intentions of the founders.

“ In six years 1,095*l.* 2*s.* 10*d.* have been spent in managing and improving the Common, a sum larger than your predecessors expended during a similar period. The improvement to the land must be obvious, even to a casual observer. A considerable portion has been furrow-drained, as must all the remainder which requires it.

“ Upwards of 1,000*l.* were expended in obtaining possession of the Common, to which ought to be added 247*l.* 10*s.* 10*d.* paid for the interest of the debt incurred on that account, and about 700*l.* for the expenses of your opponents, a sum which would have been productive of many public improvements; and we believe none regret this expenditure more than those who occasioned it now do.

The debt contracted for the schools was	£800
Of which there has been paid	350

450

The money borrowed to pay the costs of the Common was	£1,000
Of which there has been paid	300

700

Leaving a debt due by the Corporation of	£1,150
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“ We can only repeat, as this Committee has before done, our earnest recommendation to avoid all unnecessary expenses until the balance of the debt is fully paid off.

“ In looking back to the transactions of the Council, it is most gratifying to find that they have carefully and entirely avoided all jobbing, and that no one of the body has been employed in any work for the Corporation; a principle which we hope will always continue to be acted upon.

(Signed) “ NICHOLAS WRIGHT, *Mayor*.
WM. CLARKE.
ANTHY. CHARLTON.
WM. TROTTER.”

METEOROLOGICAL OBSERVATIONS.—No meteorological observations have been registered in the town of Morpeth, but those of Newcastle-upon-Tyne may be taken as an approximation; contrasted with Greenwich, the yearly means do not show that difference which might have been anticipated. By the accompanying Tables it will be seen that the quantity of rain which falls in North-

umberland is one-third more than in Middlesex. Although the winters are milder than at London, the spring in Northumberland is extremely damp and cold; when the seasons are fine, a species of monsoon prevails in April and May; the mornings are mild with the wind from the south-west, but after the middle of the day there is a sharp wind from the east, with a clear sky.

Frosts prevail in Northumberland much later than in the south; the young shoots are often destroyed in May, and occasionally in June, by frosts which occur at night. In general, vegetation in the south of England is three weeks in advance of that in this county.

FALL of RAIN in each Month in the undermentioned Years, from observations taken at West Denton, near Newcastle-on-Tyne, and from observations at the Royal Observatory at Greenwich.

	RAIN-FALL.							
	1845		1846		1847		1848	
	West Denton.	Greenwich.	West Denton.	Greenwich.	West Denton.	Greenwich.	West Denton.	Greenwich.
	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.	Inches.
January	1.15	2.4	2.16	2.8	1.43	1.4	1.05	1.2
February	1.22	0.9	1.01	1.5	1.71	1.4	4.86	2.6
March	3.33	1.5	4.06	0.9	1.27	0.8	5.83	3.1
April	2.32	0.6	3.97	3.1	2.08	1.0	2.54	3.4
May	4.33	2.2	2.43	1.5	6.22	1.4	1.52	0.4
June	2.64	1.9	3.16	0.5	2.09	1.5	5.37	3.5
July	3.19	1.9	3.56	1.5	1.72	0.7	2.74	2.0
August	7.60	3.1	2.96	4.0	1.65	2.0	3.13	4.3
September	1.66	2.1	2.18	1.8	1.34	1.6	2.94	2.4
October	5.85	1.4	6.33	5.1	3.62	2.0	6.31	3.5
November	1.60	2.4	2.77	1.5	2.91	2.0	2.68	1.2
December	2.99	2.0	5.67	1.1	3.81	2.0	1.39	2.6
Yearly Amounts	37.88	22.4	40.26	25.3	29.85	17.8	40.36	30.2

MONTHLY MEAN HEIGHTS OF THERMOMETER, from observations taken at the Literary Society, Newcastle-on-Tyne, and from observations taken at the Royal Observatory, Greenwich.

		THERMOMETER.															
		1841		1842		1843		1844		1845		1846		1847		1848	
		New-castle.	Green-wich.	New-castle.	Green-wich.	New-castle.	Green-wich.	New-castle.	Green-wich.	New-castle.	Green-wich.	New-castle.	Green-wich.	New-castle.	Green-wich.	New-castle.	Green-wich.
January	.	34.4	33.6	33.4	32.9	39.9	39.9	40.3	39.1	38.5	38.3	43.5	43.7	37.30	35.1	35.5	34.6
February	.	37.9	35.3	39.5	40.8	36.0	36.0	35.4	35.2	36.0	32.7	44.8	43.9	37.4	35.4	42.4	43.4
March	.	46.3	46.2	43.8	44.9	42.0	42.9	41.0	41.5	38.2	35.2	42.9	43.3	43.0	41.0	42.5	43.8
April	.	46.4	47.0	39.7	45.2	46.6	47.1	51.1	51.7	46.5	46.3	45.7	47.1	44.7	45.3	45.9	47.6
May	.	54.5	56.8	52.8	53.2	49.3	52.2	51.6	52.9	48.8	49.4	54.8	54.6	53.3	56.4	58.2	59.7
June	.	54.0	56.4	59.5	62.9	54.0	56.3	56.6	60.7	60.2	60.7	65.9	65.3	57.9	58.0	57.6	58.5
July	.	56.7	57.8	58.9	60.2	59.6	60.6	58.6	61.4	57.8	59.8	62.8	64.5	62.4	65.4	61.7	61.5
August	.	59.2	60.5	63.2	65.4	61.0	62.1	57.3	57.7	57.1	57.3	62.3	63.2	59.8	62.1	57.4	58.5
September	.	56.8	58.1	57.5	56.4	59.7	59.5	57.5	56.9	54.1	53.6	59.8	60.1	53.0	54.3	56.1	55.8
October	.	47.7	48.8	46.1	45.4	46.7	48.0	49.2	49.5	50.1	50.2	50.2	50.5	50.4	52.9	49.8	51.6
November	.	40.8	4.27	43.8	42.8	42.9	43.8	45.3	44.0	45.3	45.8	45.2	46.0	47.3	46.9	42.6	43.8
December	.	39.3	40.5	47.5	45.0	46.5	43.9	36.2	33.0	49.7	41.7	34.3	32.9	42.0	42.8	41.5	44.0
Yearly Mean	}	47.83	48.6	48.81	49.6	48.7	49.4	48.3	48.6	47.7	47.6	51.01	51.2	49.04	49.6	49.26	50.2
Average																	

PRESENT STATE AND CONDITION OF THE TOWN.—There are no effective sewers or drains in Morpeth; the principal streets are generally formed of broken stone “macadam,” the side channels paved with round boulders, and the principal foot-walks formed with Caithness flags. The places named to me as the most unhealthy are, the north side of the Market place, Union-street, north-east part of Old Gate; the north side of Manchester-lane, Lumsden’s-lane, and Water-row. Cotting-Burn is said to become very offensive in summer. I personally visited these places in company with the Town Clerk and others, and found many confined courts and yards, with privies close upon the houses, or, as in some cases, under the sleeping rooms. The evidence of the medical gentlemen was clear and distinct as to bad sanitary regulations and disease being cause and effect.

Robert Hawdon, Esq., surgeon, says:—

“Those parts of the town in which the inhabitants are most afflicted with sickness are invariably the places where there is crowding and filth, with an absence of drainage to carry off the wash-water and soilage; scarlet fever and other diseases of this character prevail in all such places. I always find the virulence of the disease proportional to the condition of the place in which it occurs. The public lodging-houses are always in a bad condition. In harvest time they are in a fearfully crowded state, and their previous bad condition is then much aggravated.”

I inquired if fever hospitals had been erected, but Mr. Hawdon stated: “The fever cases are treated in the places where they occur; we have no fever hospital to remove them to.” Matthew Brumell, Esq., surgeon, concurred in all that Mr. Hawdon had stated as to the causes of disease; he named Bullar’s-green as a locality liable to disease from want of proper sewers and drains. The old chapel near the bridge had been used as a cholera hospital.

During the summer there had been five cases of cholera, three of them were said to have been imported cases. One death had occurred in a room directly over a large midden—[*a sketch of the house and this room is furnished in another part of this Report*]. I made particular inquiry as to the means of preventing contagion from cholera, and found that beyond fumigation after death no other means had been taken; and that the sick-room was generally crowded at all times. The medical gentlemen before-named stated that they had no evidence of direct contagion other than from dirt and removable causes.

Mr. *William H. Robinson* complained of the fish-market, and stated:—

“That it was a very great nuisance, from a want of water to wash away the refuse. The farmers have to pass through it to the corn-market, and they complain of the bad smell, and also of having to

trample amongst the fish-guts thrown about. The Mechanics' Institution is also near here, and the smell was said to annoy those who frequented it."

The evidence of the Relieving Officer is always of much importance; as, invariably, I have found it points to the cause of much pauperism, and attendant expense to the ratepayers. A neglected and dirty district is sure to be most expensive. In most cases, the amount of the entire rental is drawn from the parish in out-door relief, and it would be cheaper for the authorities to buy up such property, remove it, and build new; or entirely remodel the whole of such places, so as to ensure the proper means of health.

Mr. *William Watson*, relieving officer, stated:—

"That he invariably had to pay the largest amount of relief in the worst districts, as there was always the most disease and distress in such places."

"SIR,

Morpeth, October 21, 1849.

"IN answer to your inquiry as to whether the greater proportion of the relief paid to the poor was confined to certain parts of the town, I beg to say that the localities in which the greatest number of paupers are residing together are the north-east end of Newgate-street, the Well way with Manchester-lane, the back riggs with Union-street, and the north side of the Market-place; in the latter place nearly every room is occupied by paupers, many of whom have been in the receipt of relief for a great number of years, and some with both children and grandchildren in the same position. These localities have a deteriorating effect on both the morals and health of those inhabiting them, as a large proportion of the illegitimate children whose mothers are natives of this town are born in them and in them also a greater number of children, both legitimate and otherwise, die than in any other parts of the town. The causes of death as registered are, convulsions, marasmus, tabes mesenterica, croup, scarlet fever, hooping-cough, consumption, and, in 1847, when these places had nearly double their usual amount of population, owing to the great number engaged on the Newcastle and Berwick railway, typhus fever of a virulent form was prevalent in all of them.

"Morpeth, from its situation on the great north road, has long been the resort of great numbers of vagrants, and before the present system was adopted of giving admission to the vagrant wards of the Union, the localities mentioned above were the places of their resort. The number of vagrants passing through the town has gradually increased ever since the vagrant wards were opened, and, as will be seen from the annexed return, the number relieved during the year ending the 25th March last amounted to 6,061, many of whom there can be no doubt travel from one Union to another during a great part of the year.

"Up to the end of 1846 the proportion of Irish vagrants relieved here was less than that of either Scotch or English; but from the commencement of 1847, when the famine and disease caused so many of the Irish to come over to England, the number of vagrants belonging to that country began rapidly to increase, and from that time to the

present they have formed one half of those relieved. In July last, I was desirous of trying whether the number could not be greatly reduced, by refusing relief to able-bodied applicants, and, in furtherance of this, I requested the master of the workhouse to inform the vagrants every morning when discharging them, that on and after the 1st of August no relief would be given to able-bodied vagrants. When the time arrived, that resolution was adhered to, and in about a fortnight the number of applications became very few indeed, and of a class entirely different from the bulk of those who had been so refused.

NUMBER of VAGRANTS relieved each Quarter and Year for 1846-7-8 and 9.

Vagrants relieved during the Quarter ending	English.	Scotch.	Irish.	Total.
June 25, 1846	137	144	85	
September 25, 1846	93	173	119	
December 25, 1846	157	230	153	
March 25, 1847	177	240	467	
Annual Number	564	787	824	2175
June 25, 1847	161	381	821	
September 25, 1847	173	414	514	
December 25, 1847	324	325	582	
March 25, 1848.	335	451	870	
Annual Number	993	1571	2787	5351
June 25, 1848	315	495	783	
September 25, 1848	275	512	792	
December 25, 1848	273	314	580	
March 25, 1849	354	456	912	
Annual Number	1217	1777	3067	6061
June 25, 1849	246	430	784	
September 25, 1849	144	238	287	
October 15, 1849	34	12	14	
Number	424	680	1085	2189

The average cost of each vagrant is stated to be about 2d.

“(Signed) W.M. RICHD. WATSON,

“To Robt. Rawlinson, Esq.”

Relieving Officer and Registrar.

These cases are all relieved in the vagrant ward at the Union house, where they have a supper, bed, and breakfast. The conduct of the vagrants used to be most riotous and violent; they frequently burnt their bedding, and destroyed the doors; but the present governor of the gaol having adopted more strict measures with such as are committed, the number of commitments have been diminished, as also the numbers of vagrants visiting the district.

The gaol at Morpeth is modern and has been a most expensive building, having, as I was informed, cost the county about 100,000l.

for the accommodation of about 100 prisoners; or, an outlay of 1000*l.* to lodge one criminal. This is exclusive of the annual expence. The building has been constructed of hewn ashlar, and in design is copied from the style of the ruined tower of the old castle adjoining. How strange that gaols should cost so much, and sewers and drains for the honest be neglected.

In Lumsden's-lane I found lodging-houses dirty and crowded, one of which was over a large ash-pit, the same where the woman had died of cholera. At the head of Lumsden's-yard there are also open middens and privies, the drains from which pass under the adjoining cottages. From a place called Bell's-yard a surface channel had recently been cut, to pass the drainage of the yard through the house. In Union-street the houses on the east side have no yard accommodation, so that all the refuse is thrown out into the street. On the opposite side there are small yards with privies and open middens, but no drainage, and all the rain-water accumulates in the middens.

The accompanying plans and sections shew the present objectionable mode of crowding houses together, many examples of which might have been given from other portions of the town. At present, as stated, there are no underground drains to pass off the liquid refuse from the privies and cesspools shewn, and the ashes and other solid refuse are only removed at long and irregular intervals. This state of things surrounds the poor inhabitants with a surface of visible filth, and also keeps them in an atmosphere of foul gases, where the seeds of disease most readily ripen. Fever, according to the medical evidence, is almost constant in these places; and cholera, as shewn, is first developed in such rooms as that over the privy and ash-pit, situated in *Lumsden's-lane*. This undue crowding is as destructive to the property, as to the health of the poor inhabitants. The wet and damp retained by the middens generate rot, and the surface filth is trodden into the houses, the cleansing of which are consequently neglected, and the result is rapid decay. If a labouring man is compelled, for want of better accommodation, to reside in such tenements, he loses his health, loses his labour, and the owner cannot obtain payment from a family reduced to pauperism, and so he loses his rent.

The ratepayers in general are losers, because the sick man must be supported; and if he dies, his widow and young family are too often left as a legacy to the parish. And families so degraded, rarely ever find means of self-support. Frequently more parish relief is expended in one month on sickness, brought about by these accumulations of filth, than would have served to put in proper drains; which might, with a regular removal of the ashes and other solid refuse, have prevented the disease and consequent expence and attendant misery. With a regular system of drainage throughout the town, the first cost on each of these tenements for

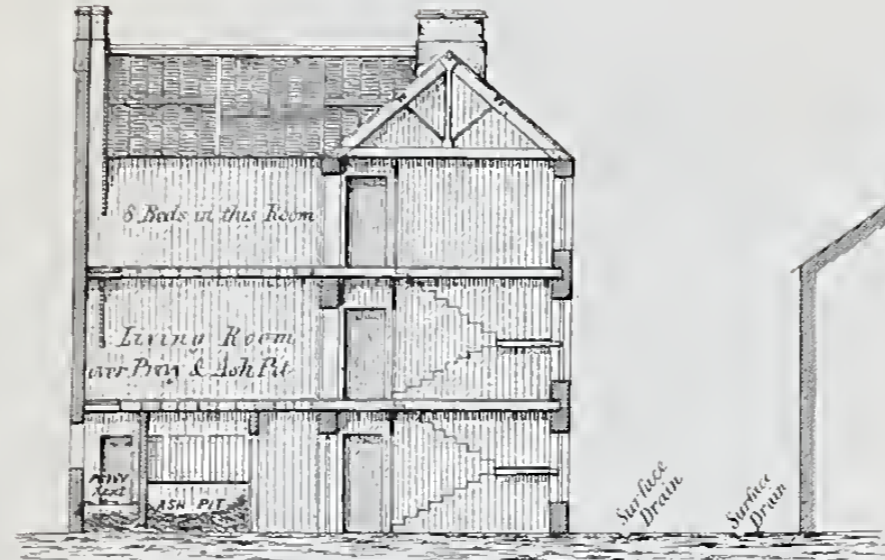
MORPETH.

PLAN AND SECTIONS OF
HOUSE IN UNION STREET,
MORPETH.

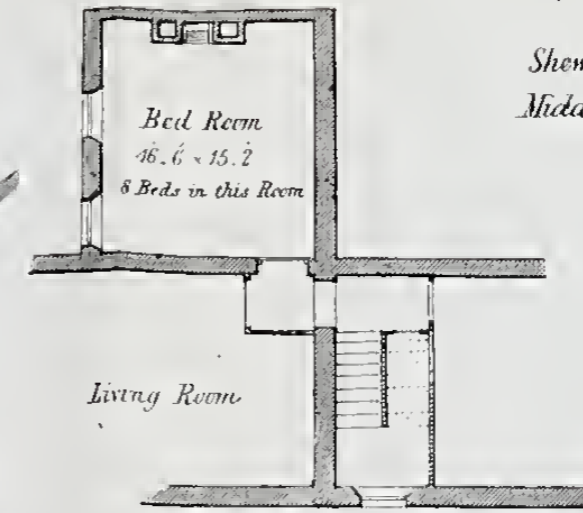
Showing crowded Cottages, confined Privies, and Middens, with Living Room placed over PRIVY and CESSPOOL.



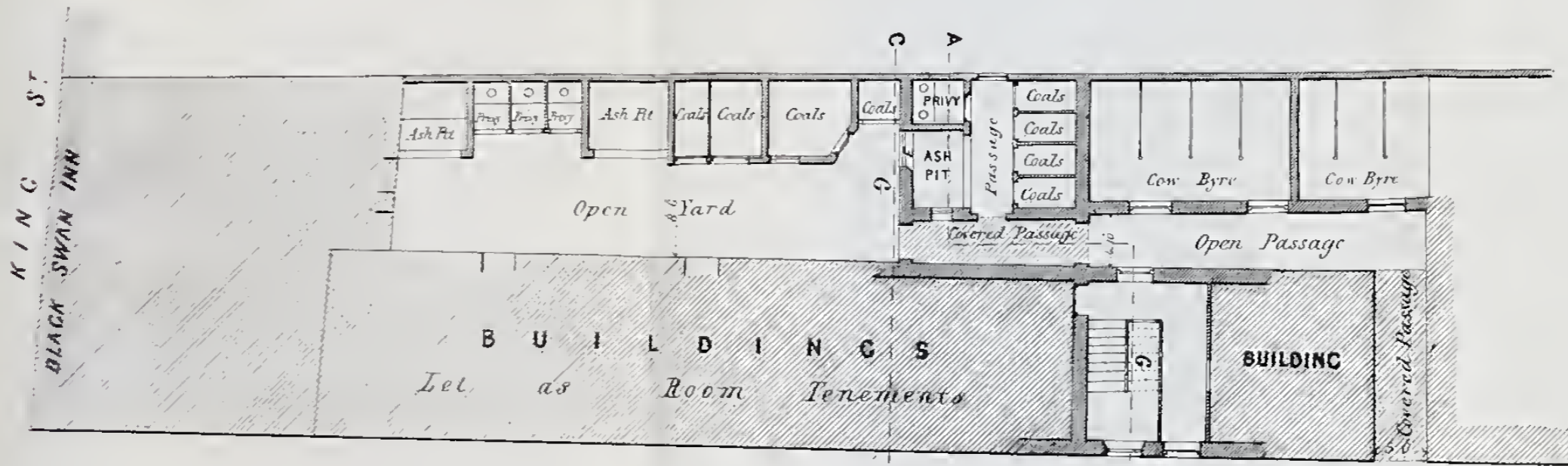
ELEVATION & SECTION ON C.D. *Section crossing Union Street*



SECTION FROM A TO B. *Section crossing Union Street*



PLAN OF THIRD FLOOR to House marked G.G.



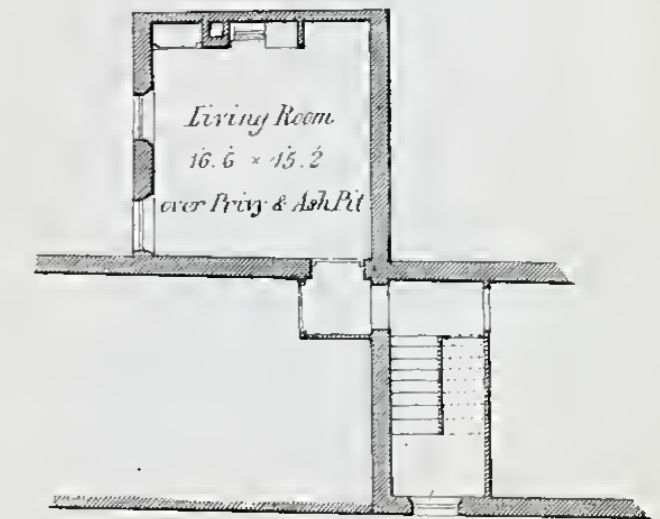
U N I O N S T R E E T

B U I L D I N G S
Let. as Room Tenements

BUILDING

B U I L D I N G S
Having no Back Yards

SCALE



PLAN OF SECOND FLOOR to House marked G.G.

MORPETH.



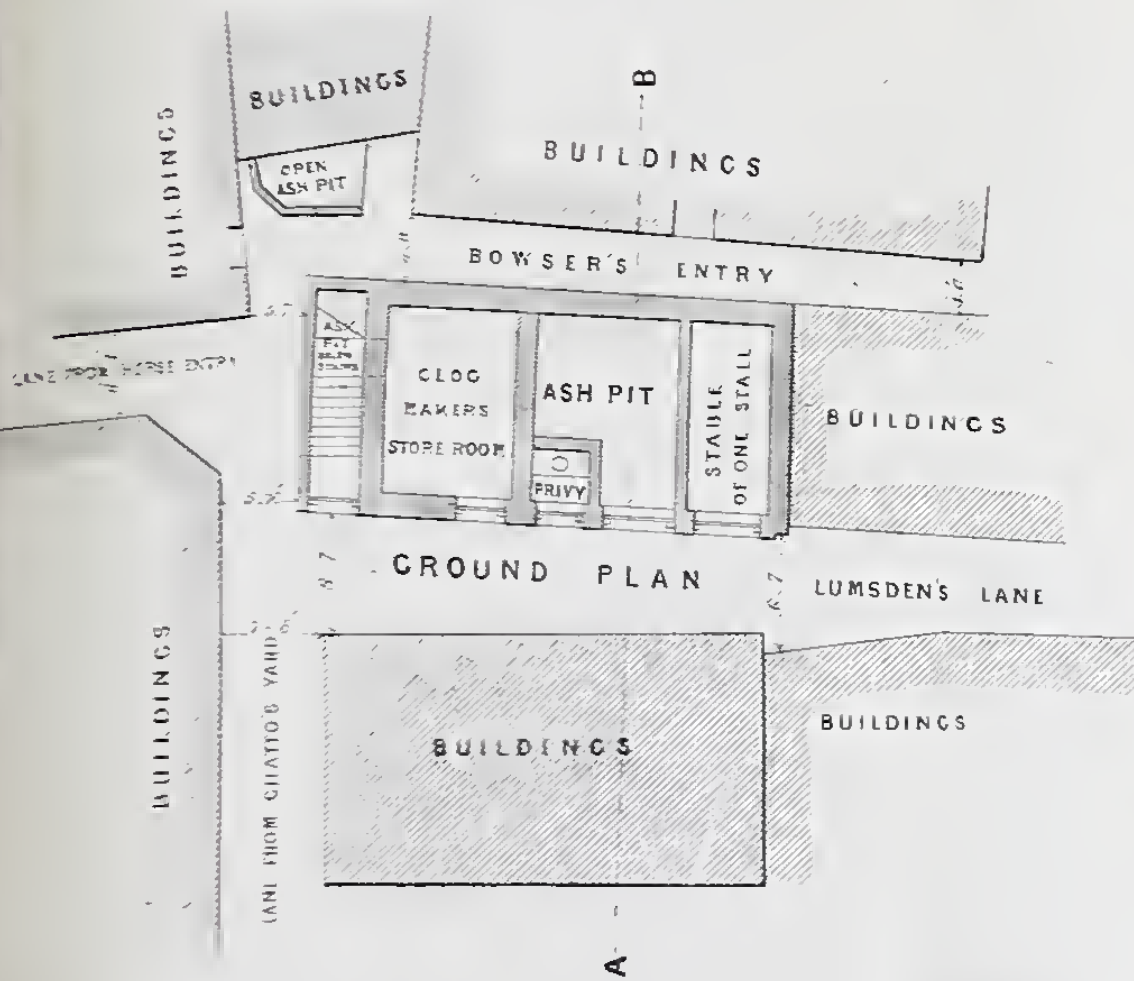
ELEVATION.



SECTION FROM A TO B.

PLAN OF HOUSE &c.
IN LUMSDEN'S LANE, MORPETH.

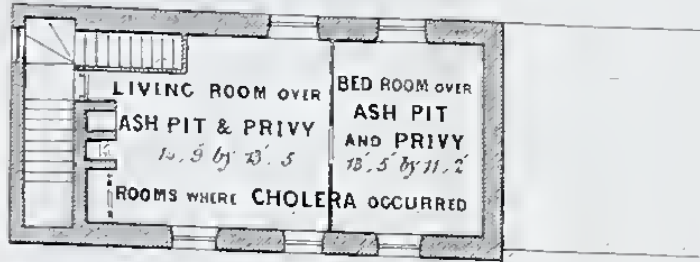
Showing the relative position of living room over PRIVY AND ASH PIT where CHOLERA occurred. The Plan and Section also show the confined state of the house front and back.



GROUND PLAN

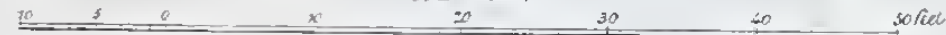


PLAN OF 3RD FLOOR



PLAN OF 2ND FLOOR.

Scale



branch drains will not exceed 10s.; and water-closets may be substituted for the present objectionable privies, at a cost of about 30s. The ashes and other solid refuse may be removed by a regular scavenger, at short intervals; and so far from these works being expensive, or oppressive to landlord or ratepayer, the probability is that the sale of the refuse will more than cover the attendant expense. A present manure is brought by railway from Newcastle-upon-Tyne, and other places; here it may be collected from the town, and can be applied to the land in the neighbourhood. But if even the whole expense named had to be incurred, without any other advantage than the improvement of the property, it would be actual economy for the ratepayers to give the sum annually, rather than maintain the poverty consequent upon fever, *never absent*. The first cost, however, small as it is, may, under the powers of the Act, be extended over a period of 30 years, so that neither ratepayer nor landlord may have just reason of complaint.

The cottages throughout the town are clean where the inhabitants have any facilities for preserving them so. The floors are in general of stone, and after having been washed it is the practice to sprinkle them over with white sand.

Near the Market-place the shops and houses have cellars under them, but for want of proper sewers and drains these are damp and wet, and, at times, they are partially filled with water. Mr. Snowdon Douglas, draper, Bridge-street, complained of his cellar, which he said was not only damp but flooded with water tainted with sewage. Mr. Mitcheson, draper, also complained of his cellar being at times three quarters of a yard deep with water from the want of a sewer. Mr. Watson, tailor, has his cellars in the same condition.

In Water-row the drainage from the high land behind the houses comes down into the gardens and yards and for want of drains the cottages cannot be kept dry.

The inhabitants generally seemed to be fully aware that proper sewers and drains would be a great comfort, and very much improve their condition. I had every facility offered for a full inspection, and was frequently solicited to give my attention to particular nuisances, as those where the water had found its way into the cellars.

The whole of the town may be most effectively sewerred and drained as shown by the estimates appended to this Report.

The most fatal epidemic which prevails is malignant scarlet fever; and in spring affections of the lungs are common.

I obtained some reports from the Morpeth Dispensary, which had been drawn up by the present mayor, whose skill, talent, and long residence in the town, and close habits of observation, entitle them to much weight. I perused them with much advantage.

DEATHS in the TOWNSHIP of MORPETH from the Books of the REGISTRAR.

—	1837	1838	1839	1840	1841	1842	1843	1844	1845	1846	1847	1848	1849	Totals.
January . . .	16	4	9	11	5	8	11	6	7	12	15	6	110	
February . . .	16	7	8	6	9	14	6	5	3	8	13	7	102	
March . . .	12	6	9	7	7	8	11	8	11	16	9	8	112	
April . . .	8	5	8	8	7	9	8	12	4	19	11	9	108	
May . . .	10	6	9	6	8	13	7	6	13	15	5	5	103	
June . . .	2	5	10	5	6	5	5	5	10	15	5	7	80	
July . . .	7	3	6	7	5	6	1	4	11	6	14	4	74	
August . . .	12	4	3	7	3	7	7	7	13	12	6	6	80	
September . . .	4	5	4	7	12	6	6	5	9	17	11	12	108	
October . . .	9	6	9	7	8	12	3	7	10	15	19	8	113	
November . . .	9	7	5	6	1	5	8	8	6	11	10	6	82	
December . . .	4	7	10	6	14	8	9	13	4	13	21	3	112	
	22	107	69	85	87	87	96	83	78	130	170	106	64	1,184

PUBLIC INQUIRY AT BEDLINGTON.—As I considered it necessary to hold an adjourned inquiry at Bedlington, official notices were affixed on the Town-hall, Morpeth, the parish church, Bedlington, and at the house of Mr. Moore, innkeeper, Bedlington, where the inquiry took place, at 11 o'clock in the forenoon, on the 19th day of October, 1849.

There were present during the inquiry, William Wharton Bardon, Esq., of Hartford House; William Longridge, Esq., one of the proprietors of the Bedlington Iron Works; A. R. Fenwick, Esq., agent to the Right Hon. the Earl of Carlisle; the Rev. E. C. Ogle, vicar of Bedlington; William Woodman, Esq., town-clerk of Morpeth; George Marshall, Esq.; Mr. George Routledge, postmaster in Bedlington; Mr. Robert Foulst, relieving-officer and registrar for the Bedlington district; Mr. French, Mr. Mason, and others. I explained to the gentlemen present the reason of the adjournment from Morpeth; that it arose out of my wish to recommend the application of the Public Health Act to the entire Parliamentary borough; for the purpose of carrying out cheap and efficient sanitary works, at the least possible cost to all parties; and also that such works might hereafter benefit by one combined local government and superintendance. I stated, that this combined action must necessarily be beneficial to all the rate-payers of the district, as proper sanitary regulations are found to improve the physical and moral condition of the people, and in a direct and indirect manner to reduce the rates.

During the day, I made a personal inspection of the village and district, in company with most of the gentlemen whose names are given as having been present at the inquiry, and I pointed out how cheaply their property might be improved by back drainage, as also the advantage which might arise to all parties if the town refuse were removed regularly, and applied as manure to the land. The evidence taken will be found embodied in this Report.

There is no local form of government in Bedlington, other than is conferred by the general Acts of the country.

The parish of *Bedlington* is situated to the east of MORPETH, and is bounded on the east by the German Ocean, on the west by the parish of Morpeth, on the north by the river Wansbeck, and on the south by the river Blythe; Willow-burn rising about the centre of the parish to the west, and falling into Sleekburn, which joins the Blythe to the south-east. The site of the village is on some of the highest land in the parish, and it consists of one wide street, most irregularly built, with the church and burial-ground near the centre. The street or village is about one mile in length, and lies south-east and west. The area of the parish is 8,900 statute aeres, and the present population is said to be upwards of 4,000. The following table will show the rate of increase.

Population of the parish of Bedlington, according to the returns published :—

	1801.	1831.	1841.	1849.
Population of Parish.	1,422	2,120	3,155	4,200 probably.

The population of the village of *Bedlington* is at present about 2,500. But with the establishment of new collieries, iron works, and other manufactories, this population is fast increasing. At the present time, cottages are in course of erection in the parish for 300 colliers and their families.

The rateable value of property in the parish of Bedlington is 13,131*l.* 15*s.* The amount of poor's-rate levied last year was 1*s.* 3*d.* in the pound sterling.

The parish of *Bedlington*, although locally situated in the county of Northumberland, was until recently totally distinct and unconnected with it, in civil and ecclesiastical matters. For civil purposes it was in Chester Ward, in the county of Durham, and in ecclesiastical affairs was and yet remains a peculiar of the Dean and Chapter of Durham. But for all lay purposes, it has by a recent Act of Parliament been constituted a part of the county of Northumberland.

Much of the land in the parish is agricultural, and is cultivated over the greater portion of its area; and until the beginning of this century, the entire occupation of the people was in agriculture. At present there are several extensive collieries, and iron-works have been established. The *Messrs. Longridge* have extensive iron-works, and a locomotive engine manufactory on the banks of the river Blythe, where at present they employ upwards of 500 workpeople. Several extensive collieries have recently been opened out, and others are at present in course of formation. This increase of trade and population have led to overcrowding in the houses and cottages, and an accumulation of nuisances very prejudicial to the health of the labourer.

The village of Netherton stands to the west of Bedlington, and is occupied principally by colliers; and about half-a-mile from

the sea is the *Hamlet of the "High Panns,"* where, centuries ago, pans were in use for the manufacture of salt, and the neighbouring mounds now grassed over are heaps of scoria, which alone remain to mark the site of former works.

At the mouth of the river Blythe is the small fishing village of *North Blythe*, and at the mouth of the river Wansbeck, is the village and ferry of *Camboise* (pronounced Cammus, from the Saxon word, signifying a place of merchandize or exchange). This hamlet, like the *High Panns*, was formerly a place of more consideration than at present. Now, the very site of the chapel which once stood here is lost, and almost forgotten.

The other villages in the parish are *East and West Sleekburn*, standing on the brook of Sleekburn, and the village of *East Chop-pington*.

MORTALITY.—The annual mortality in the village of *Bedlington* is considerably above 23 in the 1,000; but I was not able to obtain the full returns. From November 25th, 1848, to the 12th of October in this year, there were registered 79 deaths in the parish; which, taking the present population at 4,200, is above 23 in the 1,000. The deaths in the village are considerably above this average, and fever is said to prevail at all times. Cholera has broken out during this year. I beg to refer to the evidence as to the amount of fever and disease.

GEOLOGY.—The whole parish is on the lower beds of the great north-eastern carboniferous formation of England, known as the Newcastle coal-field. Almost the entire surface of the parish is a table-land, of upwards of 100 feet elevation above the sea; the surface consisting of a stiff clay soil, with clay underneath. This table land is continued for a considerable distance inland and along the coast, and will be found to correspond in level with many such tracts of the same character throughout Great Britain, indicating some former beach or line of sea-level. There are several distinct levels or lines of elevation farther inland, having the same general characteristics as this. The surface is, however, broken and contoured, rivers and smaller streams traversing the valleys, and ridges of slight elevation rising above the common level, on one of which the village of *Bedlington* has been erected. These ridges generally consist of rock; or the rock is found "cropping out," or very near the surface; and such is the case here. Occasionally such mounds are found to consist entirely of a diluvial deposit of sand, gravel, and "drift" boulders.

There is nothing in the geological character of *Bedlington* to render improvement difficult, but, on the contrary, everything is naturally favourable to health, if proper sanitary works are judiciously carried out and afterwards attended to. The site of the village is principally a sandstone rock, and a good fall may be obtained in any required direction, so that sewers and drains of the cheapest character will perfectly drain the whole district, and

these sewers and drains may be formed of tile, which may be made from the clay of the district.

By the kindness of A. R. Fenwick, Esq., I am enabled to give the accompanying letter, which details some peculiarities in the discovery of lead ore amongst the coal. A correct section of one colliery shaft will also best explain the strata of the district.

EXTRACT of a LETTER from MATTHEW LIDDELL, Esq., to Mr. FENWICK, dated Benton Grange, August 20, 1849.

“My Dear Sir,—I have been unable earlier to reply to your note of the 11th instant, respecting the lead ore found at Netherton Colliery.

“I now beg to forward an account of the strata under Netherton estate, and have only to add that the lead ore is not found generally in the fissure of the slip hitches of the colliery, but its presence is, I believe, confined to one slip dyke, running north-west and south-east across the royalty, and which throws the strata up to the south-west from six to fourteen feet in different situations. The breadth of the fissure of this dyke is generally from two to four feet, which space is filled with highly indurated clay, broken freestone, pieces of shale, and other rocks, much calcareous spar, and lead ore in large quantities, which latter is always more or less mixed with spar; indeed, there is evidently a connexion between them, as I do not recollect to have ever seen the one without the other. If more precise information is wanted, Brown, or some of the agents resident at the colliery, will be better able to go into detail than myself, but the above is, I believe, correct as a general statement.”

An ACCOUNT of Strata sunk through in the Netherton Estate, in the Parish of Bedlington; Northumberland.

	Faths. ft. in.	Faths. ft. in.
Freestone	4 0 0	
Freestone Girdles, mixed with Blue Metal } partings	5 0 0	
Blue Metal	0 2 0	
Coal (good)	0 2 0	
		9 4 0
Soft Thill	0 1 4	
Gray Band	0 1 1	
Ironstone Girdle	0 0 4	
Blue Parting	0 0 1	
Whin	0 1 1	
Blue Metal	0 3 3	
Black Jet	0 0 3	
Coal	0 0 10	
		1 2 3
Carried forward . . . . .	..	11 0 3

An Account of Strata sunk through in the Netherton Estate, &c.—
continued.

	Faths. ft. in.	Faths. ft. in.
Brought forward . . . . .	..	11 0 3
Thill	0 0 4	
Dark Metal	0 0 6	
Freestone	0 1 8	
Ironstone	6 0 6	
White Freestone.	0 4 0	
Gray ditto	1 4 0	
Dark Gray ditto	1 1 0	
Post	0 0 8	
Blue Metal	0 2 0	
White Freestone.	0 2 0	
Blue Metal	0 0 6	
White Freestone.	0 1 2	
Whin.	0 3 0	
Dark Metal Parting	0 0 3	
White Freestone	0 1 9	
Blue Metal Parting	0 0 4	
White Freestone.	0 3 0	
Blue Metal, mixed with gray	0 4 2	
Strong Girdle	0 0 3	
Gray Metal	0 1 9	
Post Girdle	0 0 2	
Blue Metal	0 1 7	
Ironstone	0 0 1	
Blue Metal	0 0 3	
Ironstone	0 0 1	
Blue Metal	0 0 2	
Ironstone	0 0 1	
Brown Stone (Shell bed), Clay, Ironstone	0 1 8	
Blue Metal, mixed with Ironstone Girdles	0 3 10	
Coal (Lowmain Seam)	0 6 6½	
Thill	0 0 3	9 5 10½
Depth of Low Main Seam . . . . .	..	21 0 1½

or 126 feet 1½ inches.

Several large whin-dikes traverse the strata in this district, and one has been worked at the east of the village of Bedlington, for material to make and repair the roads.

PRESENT STATE AND CONDITION OF BEDLINGTON, AND THE INHABITANTS OF THE DISTRICT.—The present state and condition of the village is very unhealthy. Possessing many and rare natural facilities for cheap drainage, these are not taken advantage of, but most of the houses are surrounded with stagnant water and dirt. The street is wide and open, and the site is one

of the best which could have been chosen. No form of sewerage or drainage exists which is of any practical value.

Many of the houses are confined at the back, and some have privies, cesspools, pigsties, and middens crowded against them. The cottages are unduly crowded, and there are many single-room tenements occupied by large families. Common lodging houses are not under any form of control, and they are described as "nuisances of the worst kind." Ventilation is not attended to in the cottages, room-tenements, or lodging-houses, and fever is very prevalent.

The cottages of the colliers or pitmen in the district have no form of privy accommodation, although generally kept clean and neat. It appears the pitmen have a decided objection to use such privies as exist, and from their general foul condition this is not much to be wondered at.

The following evidence on the state and condition of Bedlington was given by *Mr William Smith Longridge*, proprietor of the Bedlington iron works, who stated—

"There are no sewers in the village. There is no form of water supply, but from wells and pumps. There are three public pumps for the use of the village, kept in repair by the surveyors of highways. The water is found at a depth of about 30 feet. These wells may cost from 2*l.* to 3*l.* a fathom sinking. The pumps may cost about 10*l.* each. The annual cost in repairs to the public pumps will be about 2*l.* The tenants of the cottages at the low end of the village have complained to me of a want of water. Some of my workmen's wives have to fetch their water half a mile in summer. The cottages have no underground drainage, and the rain-water frequently stands in front of their doors. There are privies and open cesspools at the back, some against the houses."

In my personal examination I found that the public pumps were at inconvenient distances from most of the cottages, and some of the wells are on a level with the street; one such well I saw within a yard of a foul surface gutter, in front of The Mugger's Corner; the water was very dirty. There had been cholera in these houses, and fever was said to be prevalent. The following evidence connects overcrowding and fever as cause and effect—a fact perfectly established, but valuable as being locally recognised.

Mr. George Routledge, post-master, stated—

"There is no form of sewage or drainage in the village. There is generally much fever; in 1845 and 1846 we were never clear of typhus fever; this may have been caused by overcrowding, and also by want of drainage. I have known instances where three married families occupied the same room, having no separation by curtains or otherwise: this is very common. The dwellings are let off in room tenements, and are let at rentals from 2*l.* to 3*l.* 10*s.* per annum each room. These rooms are from 14 to 16 feet square. A family of from five to twelve will occupy one of these rooms. The average distance from the pumps may be about 300 yards. A general supply of water has been spoken of, as also a supply of gas. I think a great deal of our fever is caused by the

overcrowding and the nuisances about the houses. I think proper sewage would tend to remedy this state of things. There are ranges of houses confined at the back, not having more than a space of 10 feet, in which is situate the privy and ashpit, and pigs are sometimes kept in these confined yards."

The guardians of the poor had inspected the village, and many nuisances had been removed, but, without drains, all such occur again and again. This constant removal of refuse and accumulated filth is far more expensive than a proper system of drainage would be even if health were not injured by the present condition of things.

George Marshall, Esq., one of the guardians of the poor, stated—

"I have visited most of the cottages; some are confined at the back. Fever is common in the village. Most of the nuisances we found were removed at our request, but one person would not do so."

The following is the evidence of the relieving-officer, which shows that a poor and neglected property is always most expensive to the rate-payers, as the largest amount of out-door relief is required in such places; they also furnish most of the casual and permanent paupers. As in every other place where the common lodging-houses are under no regulation, they are here dirty, crowded, and disorderly; those I inspected were in the worst possible condition.

Mr. Robert Soulsby, relieving-officer of the Bedlington district and registrar, stated—

"The parish of Bedlington expends from 200*l.* to 300*l.* each quarter in relief to the poor. When families are reduced by fever, we have to relieve them, and also to furnish coffins for the funeral. I have known three persons in one bed, all down in fever. In my district I find that fever is much more common in the village than in any other part of the parish. My impression is that much of the fever arises from the want of drainage and the general filth of the village.

"There are common lodging-houses; they are generally overcrowded, extremely dirty, and filled with tramps. Twenty persons will occupy one room not more than 15 feet square; they pay 3*d.* a night for each person. Those who come first get a bed; those who come afterwards must lie on the floor."

This is at the rate of 5*s.* each night as rent for the debasing accommodation afforded, or 35*s.* a-week, making 9*l.* a-year. It is true these places are not always so fully occupied, but the sums paid are at all times in this excessive proportion.

William Wharton Burdon, Esq., Hartford House, said—

"I agree with most of the evidence stated, but I think we are not quite so unhealthy as has been described. I, however, think much of the disease is generated in these lodging-houses spoken of, and some of the back yards and ash-middens are also very bad. I think the town is most favourably situated for public and private drainage. Waterworks will, I think, be difficult to accomplish, as the water must either be pumped from the river or from wells."

Well arranged and properly managed water-works will always pay for construction, even where the whole of the water has to be pumped. This has been proved by successful practice in several towns.

The following evidence proves the generative effect of fever :—

The *Rev. Edward Chaloner Ogle*, vicar of Bedlington, stated—

“When fever does occur in the town, fresh victims are constantly added to it from the houses, as we are so overcrowded that the sick cannot be separated. Where filth exists, I find that immorality goes hand in hand with it. In the lodging-houses, and also in the cottages, there is no separation of the sexes, and consequently there is a low state of morality.

The following evidence furnished by the Vicar is the whole of the information I obtained with respect to the churchyard. Timely provision should be made for a new cemetery before the present yard becomes unduly crowded.

“There is only one burial-ground—the church-yard ; this was overcrowded, but an enlargement took place last year. There are no interments allowed within the walls of the church. At present there are no vaults within the church, but there are vaults within the yard. There have been interments within the church about 40 years ago, but not since I came to the church ; I should not allow any now.”

I found slaughter-houses crowded by cottages. Mr. Thomas Millburn, of the Turk’s Head, complained of the refuse from a slaughter-house next door, which percolated through the wall of his kitchen, and, he stated, had caused the death of one of his family. Bedlington Old Hall is let off in single-room tenements, of which there are about 18 ; these rooms are crowded, have no proper ventilation, and fever is said to be constant in them.

The following evidence was furnished to me in writing, by *Robert Hawdon, Esq.*, surgeon :—

“*To Robert Rawlinson, Esq., Superintending Inspector.*

“DEAR SIR,—In reply to your note, I beg to state that I consider sanitary improvements are much required in the village of Bedlington, where, from the population having rapidly increased of late, all the houses are overcrowded ; and although standing upon high ground, with every imaginable facility for drainage, there are no drains of any description, but privies, cesspools, and dung-heaps in every yard, and the cottages are surrounded by stagnant water, emitting a most fetid smell. I know of no place in this neighbourhood which is in so filthy a condition as Bedlington, or in which the Public Health Act is so much required. The natural consequence of the present state of things is, that the inhabitants are never entirely free from low fever ; violent epidemics are of continual occurrence ; scarlet fever occurs here in the most malignant form ; typhus frequently passes from house to house, and recently there have been several cases of cholera. The curate of the parish is now suffering from fever, communicated in visiting the sick ; and a short time ago one of

the two medical gentlemen resident in the town was unable to attend to his duties from the same cause.

“There is one part of Bedlington, called *The Mugger’s Corner*, which I must beg of you to examine, as disease always visits it; and one house, where there is a dunghill before the door, is never without fever and disease; only a few days ago I was called to two cases of cholera in it.

“(Signed) ROBERT HAWDON.”

As an instance of what may be accomplished by proper drains for a whole village, Mr. Hawdon instanced the inhabitants of the village of *Cresswell*, on the neighbouring sea coast, which was formerly subject to fever. The village was drained by the proprietor, *A. J. Baker Cresswell, Esquire*, some years ago, and fever has not been known there since.

That which the foresight and benevolence of Mr. Cresswell has done for the inhabitants of the village of *Cresswell*, a local board, under the powers of the *Public Health Act*, may accomplish for the inhabitants of the village of *Bedlington*.

REMARKS ON THE CONSTRUCTION OF THE COLLIER’S COTTAGES OF THE DISTRICT.—The cottages of the colliers are generally built in rows of single cottages. They stand on a portion of ground which affords to each a small garden behind. There is a living-room on the ground-floor, about 14 feet square, with a pantry behind; the living-room is flagged, and generally has a bed erected in it; there is a chamber over, which is reached by a moveable stair, or step-ladder; the side walls of which chamber are low, and the room is open to the slates. The form of these chambers is like an inverted v, as Λ . A detached stone, or brick oven in front, serves for baking the bread of the inhabitants of a whole row of some 20 or 40 cottages. The colliers’ cottages which I inspected in this district, had the pigsties at a distance from the house, generally at the bottom of the garden.

The things which may be improved in these cottages are the ground-floor (hollow tile would effect this); the staircase, this should be boarded off from the living-room; and the chamber should have better means of ventilation. By taking the side walls one or two feet higher, a much better chamber would be formed; and by giving means of ventilation at or near the ridge of the roof, health would better be preserved. The cottages should be drained, and clean privies, or soil-pan closets, would probably overcome the colliers’ prejudice against their use. Confined in a well-ventilated mine, and following that which appears to be a very dirty occupation, their sense of smell is more refined than in labourers occupying a similar rank in life and living altogether above ground.

CHARACTER OF THE WORKING COLLIER.—The working collier delights in gardening; he is a bird-fancier, and a dog-fancier also. In all the rural games of the district he excels. He can

throw the quoit well, and "thumb it in" most dexterously if required; he is the truest shot at a target; the best bowler in summer. He keeps the best bred and fattest pig; the most choice and best singing canary; and sometimes, unfortunately for himself, the best fighting dog. He grows the best potatoes, the finest cabbages, and frequently cultivates the most choice and rare tulips. The collier would not exchange his occupation for any form of day-labour above ground; and give him full work, his regular pay, and the means of following the cherished pursuits afforded by a private garden, with the comforts of a clean cottage, and few labourers are more contented and happy. It is true a thoughtless and negligent employer may reverse much of this feeling. If the man is sent day after day into a mine carelessly ventilated, he becomes himself careless. If he has no means of home comfort above ground in house or garden, he may become dissipated; and, neglected in all respects, it is not to be wondered at that under such circumstance he becomes reckless. A deficiency of regular employment, from whatever cause, produces discontent, not only with the collier, but amongst all classes dependent upon their labour.

THE PRESENT WATER SUPPLY.—Springs are abundant in the valley where Morpeth is situated, and also in the land surrounding it. Some of these have been enclosed, as St. Thomas Well;* and at Newminster Abbey the monks brought spring-water into their abbey through lead pipes, some of which have recently been dug up from the ruins. Springs and wells, however abundant, are found to be inconvenient for the inhabitants of a town. They are necessarily at a distance from many of the houses; the supply is usually limited, and in a dry summer a portion of it fails just when its use is most required. These evils were experienced in Morpeth; and to remedy a portion of them, Mr. Thomas King constructed water-works in the year 1820, by impounding several springs which rise at an elevation of about 50 feet above the town, and a quarter of a mile to the south-east. The reservoir is a mere pit dug in the soil. It is circular, about 20 feet in diameter, and some 4 feet deep. A 3-inch pipe carries the water across the river into the town, where it is distributed to a portion of the inhabitants only.

List of Houses supplied and otherwise.

150 houses, occupied by 169 families, have water from Mr. King's works.

442 houses, occupied by 738 families, have no direct water supply.

* At very early times the well of St. Thomas, near the east end of the Copper-Chare, was an object of care and solicitude. It is frequently referred to in local descriptions. There are several springs united, the produce of which are about six quarts a minute. In some ancient deeds the river is spoken of as "The river—the great river Wansbeck."

Value of Houses supplied and otherwise.

	£.	s.	d.
150 houses supplied, value	2,339	18	0
442 houses not supplied, value	2,043	19	0
<hr/> Total 592	<hr/> 4,383	<hr/> 17	<hr/> 0

It will be seen from these tables that the poorer families are not supplied from the works, and it is for the full supply of such that the provisions of the Public Health Act were framed.

A 3-inch pipe, such as the one brought as a main from the existing works, is not sufficient to give the quantity required at present; and it frequently occurs that no water can be had from the taps above the market-place.

ANALYSIS OF WATER FROM THE PRESENT WORKS.—One gallon contains 20 grains of solid matter, principally carbonate of lime, some muriates probably of lime or soda, and a trace of silex. The specific gravity is 10,002, pure water being 10,000.

List of Rates charged.

	Per Annum.		
	£.	s.	d.
The gaol	10	0	0
William Watson, iron-founder	5	0	0
Thomas Swan, tanner	4	10	0
Joseph McLellan, brewer	3	0	0
Margaret Pringle, innkeeper	2	2	0
Peter Storey, hairdresser	1	0	0
James Miller, cottager	0	5	0
Water-closets are charged each	1	0	0

The supply is constant, and the charge is regulated not so much upon the rental as for the quantity likely to be used. Five shillings per annum is the lowest charge, and this is for one family, whether occupying an entire cottage or a single room. As only a few of the cottages and room-tenements are supplied by agreement, others obtain the water without paying for it from the stand-cock in the yard, as it is not taken by pipe into each cottage and room-tenement supplied. It is only recently that water-closets have been erected, and there are not a dozen in the whole town at present, and for want of proper sewers those put up are said to be a great nuisance.

There is no form of public supply of water in Bedlington, but it is obtained from three public pumps, and from local wells dug in the surface rock, and some of these I found, on inspection, to be very dirty. The average distance the cottagers have to fetch this water was said to be at least 300 yards, and in summer some of these wells are dried up; at such times great inconvenience is experienced, and besides having to go to the distance named, the females have to wait for a considerable time before they can obtain water, as the well or pump is crowded. I was informed that these places were so crowded at times up to

midnight, and many persons obtained an inferior water from pits in the fields.

Pumps and wells are most expensive and inconvenient means of supply to a town, if even the water is pure and abundant, as the loss of labour in fetching it, the breakage and wear of the utensils to carry and reserve it, amount to more than a full public supply ought to cost. The first outlay for the pump and annual repairs have been calculated to cost each cottager at least 1*l.* per annum, and this is frequently for an impure, inefficient, and limited quantity. But if the water is the best possible at the well or pump, the fact of its being retained in open vessels in a crowded cottage or room-tenement, exposed to gases from animal and vegetable matter, soon renders it quite unfit for use, and frequently highly injurious to health. Where water is obtained with so much labour and trouble, its use is limited, and as a consequence personal and household cleanliness is neglected to an extent most injurious to health.

A full supply of pure water laid constantly on in each cottage, at a charge not exceeding 1*d.* per week, is one of the greatest boons which can be conferred upon the labouring man. It will be an essential advantage to the working collier. This question of supply is entered into in the remedial measures proposed.

LIGHTING.—The town of Morpeth is now lighted with gas, the works which supply it having been established by a public company in 1832. Previous to the Corporation Reform Act the town was almost in entire darkness, but the Council from the borough fund pay for 14 public lights; they are however insufficient, as a lamp ought to be placed at every 50 yards. Much advantage would be derived from the narrow alleys being lighted. This might be done under the provisions of the Public Health Act.

The following table shows the prices of gas at this and some of the neighbouring towns.

The GAS WORKS in the MORPETH DISTRICT, with Prices.

TOWNS.	Popu- lation.	Per 1000 Feet.	Batwing till 8.	Public Lamps, with Times of Burning.
		<i>s. d.</i>	<i>s.</i>	
Newcastle ..	100,000	4 6	23	{ 10 <i>d.</i> per lamp per week, from sun-set to sun-rise, one-half in summer from 21st Apr. to 21st Aug., the whole from 21st Aug. to 21st Apr., not off during full moon. Lamps for the year, 43 <i>s.</i> 4 <i>d.</i>
North Shields	25,000	4 0	20	{ 40 <i>s.</i> per lamp from 1st Sept. to 1st May, off four nights during full moon.
Hexham ...	5,500	6 8	30	{ 42 <i>s.</i> each, off seven days at full moon, and 14 weeks at Midsummer.
Alnwick	6,000	8 0	31	{ 45 <i>s.</i> each till 11 o'clock, 68 <i>s.</i> till 3 A.M., off seven nights at full moon, and 14 weeks at Midsummer.
Morpeth....	3,600	8 4	25	{ 42 <i>s.</i> each from sun-set to sun-rise, off seven nights at full moon and 14 weeks at Midsummer.
Belford.....	800	12 0	{All by meter	{ 10 <i>s.</i> per 1,000 feet, half the night from 10th Sept. to middle of April.
Brampton ..	300	8 0	25 <i>s.</i>	{ 40 <i>s.</i> each, off nine nights at full moon, and 16 weeks at Midsummer.
Amble	Small.	9 2	25 <i>s.</i>	60 <i>s.</i>

There are no public lights in Bedlington at present; there are no gas works in the neighbourhood, but such would be a great public and private advantage.

SLAUGHTER-HOUSES IN MORPETH AND BEDLINGTON.—There is no regulation as to the management of slaughter-houses in either place, and consequently each butcher chooses such position as he may think fit. They are in general close to his own dwelling-house and shop, and are crowded by other dwelling-houses; the refuse and garbage (as instanced in the evidence at Bedlington) are thrown on some midden, exposed, and in contact with the adjoining house-walls; for want of drains the yards are fouled with garbage and blood, and much inconvenience and disease arise from their being so situated and mismanaged.

LODGING-HOUSES.—The following graphic description of the lodging-houses in Morpeth was furnished by the Town-Clerk, and it applies with equal force to those in Bedlington. I can bear my testimony to the accuracy of the description.

“No part of the Health of Towns Act will be more useful to this borough than that which gives power to regulate lodging-houses. The accompanying table will show the numbers who occasionally congregate in those places; the information was certainly acquired from an inspection at a time when they were unusually full, from the Irish and other labourers who in harvest come here in search of work; still it must be remembered, this crowding is at the very season when fever and diarrhoea are most readily engendered, and certainly a more effectual method of creating and spreading disease could not be hit upon than that of cramming the lodging-houses to such an extent. The table will show the narrow space afforded to each individual, but it can give no idea of the actual state of the rooms or the scenes they exhibit. Those that offer beds have these articles of luxury filled with as many as can possibly lie upon them. Others find berths below the beds, and then the vacant spaces on the floor are occupied. Among these is a tub filled with vomit and natural evacuations. Other houses have no beds, but their occupiers are packed upon the floor in rows, the head of one being close to the feet of another; each body is placed so close to its neighbour as not to leave sufficient space upon which to set a foot. The occupants are entirely naked, except rugs drawn up as far as the waist, and when to this is added that the doors and windows are carefully closed, and that there is not the least distinction of sex, but men, women, and children lie indiscriminately side by side, some faint idea may be formed of the state of these places and their effect upon health, morals, and decency. But nothing but an actual visit can convey anything like a just impression of the state of the atmosphere; those whose senses are not very nice cannot breathe it with impunity, even for a few seconds, with others two or three inhalations are certain to produce sickness; what then must it be to those who sleep there for hours? Those who are upon the floor certainly breathe the freshest air, but all experience the bad effects, and suffer more or less from the poison they create; fevers prevail, and the sick ward of the workhouse is filled with typhus in its worst form from these places.”

A TABULATED LIST of LODGING-HOUSES in MORPETH.

Where Situate.	Proprietors.	Size.		Height.		In-mates
		Ft.	In.	Ft.	In.	
Newgate-street .	Thomas Flannagan	12	9 × 13	0	7	5
		13	4 × 12	8	6	10
		13	0 × 12	10	6	10
Same . . .	James Flannagan	19	0 × 14	2	7	0
Same . . .	Richard Kayter .	14	6 × 11	6	6	9
Same . . .	Mary Morrison .	19	4 × 13	7	7	7
Same . . .	Michael Conolly .	16	0 × 9	3	7	0
Same . . .	Mary Henderson .	15	6 × 11	0	8	0
		15	6 × 8	6	8	0
		15	7 × 8	6	7	4
		15	7 × 8	6	7	4
		15	0 × 15	0	7	6
Copper Chare .	Charles Flannagan	15	0 × 13	9	7	10
Backway . . .	Anthony Cockling	18	0 × 9	0	7	0
		15	7 × 13	7	8	0
		15	7 × 11	11	8	0
Manchester-lane.	Dorothy Nuttall .	16	8 × 12	0	10	0
		13	10 × 13	8	7	6
		13	5 × 13	9	7	6
		13	7 × 13	7	7	0
Manchester-lane	Catherine Hackyard	13	4 × 13	9	7	0
		16	0 × 16	0	8	0
		15	0 × 16	0	6	10
		14	8 × 15	6	7	0
Newgate-street .	Margery Mitford .	14	8 × 15	6	7	0
		15	6 × 14	8	8	4
Same . . .	Edward Kilboy .	15	7 × 14	7	7	9
Backway . . .	Thomas Flannagan	15	8 × 15	7	7	8
Backway . . .	Thomas Flynn .	13	5 × 11	8	6	7
		12	0 × 14	8	8	0
		13	9 × 12	6	8	2
		13	10 × 12	9	7	6
		13	5 × 10	9	7	10
Bridge-street .	Patrick Murphy .	13	6 × 12	3	7	6
		13	10 × 10	9	7	6
		13	5 × 11	0	7	10
Bridge-street .	Mary Tucker . .	18	6 × 15	10	6	10
		15	2 × 12	2	7	9
King's Head-yard	Jane Finn . . .	15	0 × 12	10	6	6
		15	0 × 12	4	7	2
		15	0 × 12	4	7	2
Same . . .	Mary Marron .	16	8 × 9	9	6	7
Same . . .	Matthew Mare .	14	8 × 14	4	7	10
Same . . .	James M'Carty .	15	4 × 11	0	7	8
Bridge-street .	Richard Fagan .	11	4 × 15	6	6	11
		5	4 × 10	9	6	10
Lumsden's-lane .	Jane Aspin . . .	14	9 × 12	4	7	5
		14	7 × 12	9	7	4
		14	9 × 12	4	7	5
Same . . .	Andrew Cockling	14	7 × 12	9	7	4
		19	6 × 14	8	8	0
Same . . .	Margaret Storey .	14	6 × 14	8	8	0
		14	9 × 11	4	8	0
		15	9 × 13	8	7	2
		15	7 × 15	0	7	0
Newgate-street .	Bernard Ward .	14	7 × 12	9	7	4
		19	6 × 14	8	8	0

This table can only show the number of inmates at the time of the inspection. But space alone limits the numbers at other times.

The reckless, thoughtless people crowd each other without any regard to health, and during such periods conversation is used, and scenes are enacted, which civilization has no language to describe. The following letter indicates some of the evils.

“ SIR,

“ *Morpeth, October 18, 1849.*

“ WHEN giving evidence before you yesterday upon the sanitary condition of this town, there was one subject towards which I ought to have directed your attention, proving (as I believe it does) a fruitful source of disease in this town during the autumnal months of the year. I allude to the condition of the lodging-houses kept for the accommodation of vagrants and persons of that description, and which about this period of the year are crowded with Irish, who come into this neighbourhood for the purpose of assisting in the harvest.

“ Such houses are generally kept by the lowest description of Irish, and are situated in the narrow lanes of the town, without any provision for ventilation, and many of them in the most filthy condition. During the present autumn I have personally inspected many of these houses, and believe them to be quite unfitted for accommodating the number of persons that are generally crowded into them.

“ The beds are placed round the walls of the room, whilst its centre is occupied by such as cannot find accommodation in the beds; and, in some cases, others are actually crammed under the beds upon which individuals already lie asleep. In one room, 15 feet 6 in. × 14 feet 8 in., and 7 feet high, I found 27 persons assembled for the night, while others were still waiting at the door demanding admission.

“ In other rooms straw beds were arranged in such a manner as to admit 12 or 15 persons being huddled together perfectly naked, and covered only with coarse rags, which the heated state of the apartment had induced many to discard altogether.

“ This crowded state of the rooms, together with the filthy habits of their occupants, and the entire absence of any provision for ventilation, produce in a very short time an atmosphere almost suffocating; and it generally happens that about this season typhus (often in its worst forms) shows itself in those localities, and continues to prevail to a greater or less extent during the greater part of the winter.

“(Signed)

MATTHEW BRUMELL,

“ *Surgeon to the Morpeth District
of the Morpeth Union.*

“ *To Robert Rawlinson, Esq.,
Superintending Inspector.*”

Some general regulation of common lodging-houses will soon be necessary, as the vagrants will shun those towns brought under the Act, and crowd into places not under local regulation. The evil is a national one, and the remedy must be general. I cannot refrain from urging the condition of these places again and again upon the notice of the local authorities. A proper regulation of *vagrants' lodging-houses* should, in my opinion, be one of the first works of sanitary improvement. At present they are forcing-houses of vice and disease—misery and crime—and are in every respect a direct and indirect tax upon the ratepayers.

BURIAL GROUND AT MORPETH.—No better situation could be

found for a burial-ground than the High Church, at the distance of a mile from the town, and upon rising ground. It may, without prejudice to health, be increased to any required extent, as it is quite free from the town.

The following are the burials in it since 1663; and as the town has not been liable to much change, the table will indicate with tolerable accuracy the annual local variations.

Years.	Deaths.	Years.	Deaths.	Years.	Deaths.	Years.	Deaths.	Years.	Deaths.
1663	24	1701	40	1739	69	1777	79	1815	68
1664	43	1702	21	1740	93	1778	88	1816	80
1665	60	1703	46	1741	165	1779	92	1817	88
1666	22	1704	47	1742	122	1780	80	1818	91
1667	45	1705	70	1743	81	1781	195	1819	72
1668	56	1706	35	1744	72	1782	111	1820	92
1669	42	1707	40	1745	77	1783	88	1821	89
1670	61	1708	46	1746	190	1784	111	1822	88
1671	60	1709	47	1747	90	1785	125	1823	91
1672	44	1710	64	1748	96	1786	106	1824	81
1673	61	1711	60	1749	78	1787	89	1825	100
1674	83	1712	42	1750	120	1788	108	1826	94
1675	77	1713	28	1751	114	1789	106	1827	86
1676	53	1714	41	1752	66	1790	90	1828	85
1677	43	1715	61	1753	123	1791	86	1829	101
1678	50	1716	40	1754	153	1792	74	1830	88
1679	63	1717	114	1755	78	1793	135	1831	94
1680	61	1718	61	1756	94	1794	90	1832	82
1681	68	1719	53	1757	122	1795	104	1833	112
1682	91	1720	60	1758	94	1796	94	1834	75
1683	148	1721	51	1759	112	1797	120	1835	86
1684	50	1722	41	1760	103	1798	74	1836	122
1685	52	1723	108	1761	103	1799	88	1837	135
1686	52	1724	101	1762	105	1800	96	1838	110
1687	75	1725	44	1763	107	1801	93	1839	79
1688	62	1726	50	1764	122	1802	93	1840	89
1689	58	1727	67	1765	51	1803	92	1841	91
1690	44	1728	85	1766	96	1804	113	1842	99
1691	50	1729	73	1767	104	1805	69	1843	104
1692	62	1730	69	1768	117	1806	81	1844	93
1693	40	1731	98	1769	99	1807	81	1845	67
1694	39	1732	74	1770	105	1808	70	1846	118
1695	96	1733	98	1771	119	1809	64	1847	165
1696	41	1734	74	1772	114	1810	90	1848	112
1697	50	1735	55	1773	113	1811	54	1849	75
1698	55	1736	73	1774	97	1812	98		
1699	33	1737	77	1775	117	1813	62		
1700	39	1738	73	1776	130	1814	90		

A study of the table will show a constantly varying mortality; and as the population has not varied materially, the cause of the periodic increase is no doubt to be accounted for by the state of the seasons being favourable or otherwise to the spread of epidemic, endemic, and contagious diseases.

The churchyard was considerably enlarged about 1795, by the addition of a piece of ground to the west, but it is still too much crowded; and part of the ground which is at the back of the church is lost, from a prejudice common in the north of England that felons only are to be interred there.

The extent of the churchyard, including the land planted with shrubs, and not used for burials is 1 acre, 2 roods, 36 perches.

GENERAL BOARD OF HEALTH.

Queries issued under the Statute 12th and 13th Vict., cap. 3, sec. 9 and 11, in respect to intramural interments in the Metropolis.

1. What is the name of your church or chapel? And in what parish or district is it?—St. Mary's, in the parish of Morpeth.

2. Have you any consecrated burial-grounds, and where situate?—One, adjoining the parish church, about three quarters of a mile south of the town of Morpeth.

3. What is the extent of each in square yards as near as you can tell?—7,471 $\frac{3}{4}$ yards.

4. About what quantity in each ground (stated in square yards) has been appropriated by faculty or by purchase?—None.

5. About what is the quantity of the above of which the owners are at present unknown? State the quantity in square yards?

6. Are the burial-grounds, or all or any of them, open for use?

7. If closed, when, and by what authority?

8. What is the extent of the vaults, tombs, or brick graves under the church or chapel; how much of same is occupied? State generally what interments have taken place under your church or chapel, and still continue to take place? Is there room for many more interments in them?—I believe there are only two vaults under the church. One of these is permanently closed. There have been two interments under the church during the last seven years.

9. Are there any other burial-grounds in your parish or district not connected with the Church of England; and if any, what, to what extent, and by whom held?—I believe one belonging to the Presbyterian meeting-house.

10. What is the population of your parish or district?—The population of the town is about 5000.

11. Please to state, if you know, the number of deaths annually?—See accompanying schedule of interments.

SCHEDULE of the Total Number of Interments of each Class, during each of the Years hereunder set forth.

1842		1843		1844		1845	
Number.		Number.		Number.		Number.	
Adults.	Children.	Adults.	Children.	Adults.	Children.	Adults.	Children.
67	31	64	36	63	29	59	23
1846		1847		1848		Total of each Class.	
68	50	90	75	69	41	475	305

12. What was the total number of interments within the burial-grounds, vaults, tombs, within your parish or district, connected with your church, in the years—

1842 . . . 99	1846 . . . 118
1843 . . . 104	1847 . . . 165
1844 . . . 93	1848 . . . 112
1845 . . . 67	
	Total . 758

13. Please to state the relative proportion of the persons of the several classes interred, as far as you are able ; specifying

1. The gentry, and professional persons.
2. Tradesmen and shopkeepers.
3. Mechanics and labourers.
4. Paupers.

—There are no vaults at all except the two in the church, and only one or two brick graves.

14. How and when was each burial-ground obtained ? By immemorial occupation, by purchase, or by gift ?

15 Do you know whether the burial-ground is subject to any permanent charge either to the incumbent or to any one else ?

16. Do the parishioners pay any fee to the churchwardens for interment in the burial-ground, or do the incumbent, clerk, or sexton only receive fees ?—Only the incumbent, clerk, and sexton.

17. To whom are the fees paid if yours be a district church or chapel ?

18. How long is it probable that the present burial-ground will be sufficient for the purpose of burial ?—I cannot say.

19. Are the grounds surrounded by dwelling-houses or other buildings, and to what extent, or in what manner enclosed, and what is the relative level of the burial-ground compared with the adjacent streets ?
—No

20. On what days of the week, and at what hours, are funerals most frequent ?—There is no particular day. The usual hour is about 4 in the afternoon.

21. Enclose a copy of table of fees relating to interments, monuments, tablets, &c., both in respect of church and chapel, and of church and chapel burial-grounds ?—Burial fee to the incumbent is 6*d.* ; fee for erecting a headstone 1*l.*

22. Who receives orders for the interments in the burial-grounds, vaults, &c. ? And who selects the sites for interments ? The clerk, or the sexton ? And who keeps the register ?—The sexton.

23. Have you any suggestions to offer in reference to burial-grounds ?
—If so, please to state them ?

[Where answers are not given it is presumed they could not be furnished.]

(Signed) F. R. GREY, *Rector of Morpeth.*

STREETS, FOOT-WALKS, AND ROADS.—The public roads within the township of Morpeth are repaired by various parties, the foot-paths in the streets are maintained by the occupiers of the adjoining buildings, as will be seen by the bye-law No. 15 ; this, however, creates no new liability, but only enforces that which was established by ancient custom. The Earl of Carlisle is bound by tenure to repair the cart-way in Bridge-street, the

Market-place, and Newgate-street; the Corporation repair a part of the roadway in the Copper Chare and the Dogger Bank. The roads in King-street, Union-street, the Well-way, and all others, are repaired by the inhabitants of the township, under the superintendence of two surveyors, who are appointed annually.

The management of the roads by so many different parties is neither beneficial nor economical, and much advantage would be derived by their being under one control; each party who is now liable contributing to the general fund in proportion to the length of road he is liable to keep up.

At present the roads within the proposed boundary are managed by sixteen distinct bodies; few of the roads are in sufficient repair, but if all were under one general management they would be much better kept than at present, without any extra expense.

Some of the foot-walks have a kerb, and are paved with Caithness flags, which are laid down on the quay at Newcastle-on-Tyne at the following prices:—

No. 1.	$2\frac{1}{2}$ inches thick, and sawn edges	$5\frac{1}{2}d.$ per foot superficial.
No. 2.	$1\frac{3}{4}$ „ „ to $2\frac{1}{4}$ „	$4\frac{3}{4}d.$ „ „
No. 3.	$1\frac{1}{4}$ „ „ to $1\frac{3}{4}$ „	$3\frac{3}{4}d.$ „ „

Granite Kerb from Aberdeen.—One foot broad and from 6 to 8 inches thick, 1s. to 1s. 4d. each lineal foot.

Freestone Kerbs at Morpeth.—One foot square $9\frac{1}{2}d.$ each lineal foot.

NOTE.—Caithness flags may be obtained at a less cost by ordering them direct from the quarries, in an entire cargo, and paying for them when delivered.

REMARKS ON ROAD FORMATION, STREET PAVEMENTS, FOOT-WALKS, AND STREET CROSSINGS, AS APPLICABLE TO MORPETH.

Defects in present Pavements as used in large Towns.—Granite, limestone, or other stone pavements chosen for their hardness, are found invariably to become slippery from wear, and consequently that which recommends them for durability is fatal to their safety; and to partially remedy this defect, one of the first essentials to a perfect pavement is set aside, namely smoothness: the stones are procured narrow, and are set wide apart, to give good foot-hold to horses; and thus, to avoid one defect, three others are substituted. Each stone rests on a narrow base, and is, in a measure, isolated or separated by a wide joint, leaving it, as it were, independent. The open joint admits wet and harbours dirt, and the space between each stone causes the wheels to strike the edge of the stones, instead of passing smoothly over the pavement. This action is destructive alike to pavements and vehicles, as every wheel acts the part of a pavior's rammer; and to this is added the constant jarring noise, so disagreeable to passengers and tradespeople.

Macadamized roads for towns have been tried on a large scale in Birmingham; in fact, all the streets in that town and the roads surrounding it are of this description of material, and with constant care and attention they are found to possess many advantages. When in perfect order they offer a comparatively smooth

and even surface for the wheels of carriages, and when well watered and cleansed, they also afford a secure footing to horses; the carriage passenger experiences less of jarring, and the shop-keeper and pedestrian less of noise. To produce and maintain a good street surface of broken stone, several things are necessary: the material should be hard, to resist wear; it should be broken to an uniform size, that the wear may be equal, and means should be taken to form it into an even surface before the stones are separately rounded by the traffic; and the street or road should have a well-drained and solid foundation on which to place the broken material. When such a road has been formed, it requires constant attention and care to preserve it in perfect order; it must be regularly watered and swept in dry weather, and well cleansed by sweeping in wet weather; and to do this the most effectively and cheaply the surveyor of Birmingham states from experience that Mr. Whitworth's machines are necessary.

“Sweeping is the only mode of cleansing that should be allowed, either in streets or turnpike roads; sweeping by the wide brooms of Mr. Whitworth's machine is preferable to all other modes of cleansing yet tried. It must be evident that the fact of these wide brooms, sweeping longitudinally with a pressure that can be adjusted according to circumstances, tends powerfully to preserve the road, and to consolidate its surface.”

It will be found that the refuse from the sweeping-machine is of three kinds after it has been shaken in the body of the machine by removal. The coarse grit falls to the bottom, the finer particles and mud rise towards the surface, and the dirty water will swim on the top. This, with the mud, can be run off in the yard, and the bottom grit should be reserved to mix with the broken stone when a new road is laid down, or when a new coating is required for repairs upon any road or street. This grit is composed of small angular fragments of the same material as the broken stone from which it has been fractured, and if added to the stone when newly laid down, it forms a bed or matrice in which the angular blocks rapidly bed themselves before the carriage and cart wheels can grind them round. A newly-formed or newly-repaired road should be well watered and attended to for a few days; the wheel ruts should be immediately levelled in, all loose stones thrust down or removed at once, and instead of a newly macadamized road remaining a nuisance to the inhabitants, dangerous to equestrians, and a killing drag to cart and carriage-horses for weeks, the surface will set smooth and firm in a few days: and such a road or street, well attended to afterwards, will wear from one to three years.

It ought never to be lost sight of, that neglected, imperfect, and bad roads and streets are the most expensive. They are disagreeably dusty in dry weather, and they are destructive alike of health and comfort in wet weather; a rough and uneven road

rapidly destroys the wheeled vehicles which pass over it, and their violent action when in motion, tends, in an aggravated degree, to the further destruction of the road; ruts and holes retain the wet; this softens places already weak, and accumulates mud; and on such roads horse power is wasted, at times, to the extent of one-half, or 50 per cent. "It is a common error to consider that road or street the cheapest which costs the least in direct expenditure;" and it is just as common an error to consider that road or street the best which has cost the most in its first formation. Perfect cleansing and constant attention and care are requisite on the most expensive pavement; and with this a macadamized street or road offers many and singular advantages.

A well-formed and well-kept street or road should be nearly flat on cross section, and if regularly swept, side-channels are not needed other than that which a very slight fall will give against the side-kerb. A flat road enables vehicles to pass with equal facility over its whole surface, thereby giving an equal wear; a section much rounded is most used at the crown of the road, and thus becomes unduly worn at that part.

Side channels may be formed with well-squared stone pitching, set in a line with the cross section of the street, and having a graduated fall to the gully-grate; by keeping the channels flat the machine will sweep them perfectly, and dirt or wet ought not to be allowed to accumulate in them under any circumstances.

Foot-walks within the town may be formed of tiles, small and well-squared sets, or flags; these will form a dry foot-walk, and allow of easy repairs. Kerbs may be of granite, limestone, or such other hard stone fit for the purpose as the district may produce; a hewn granite or sawn plate channel slab is an extravagant expenditure which ought to be avoided, as the amount saved by using cheaper materials may be better laid out in the hitherto neglected back streets.

Street crossings may be formed most cheaply of small sets, well squared and set close, or of granite pitching.

Pebble pavements have generally been banished in towns from all streets over which there is much traffic, and their use ought to be entirely abolished, as the form of the stone is the worst possible for comfort and wear.

PUBLIC PARKS AND RECREATION GROUNDS.—The following Reports will show to the General Board what has been done by the Corporation of Morpeth for the instruction, exercise, and amusement of the people. When proper drains and sewers have been made, a full supply of water given, public baths established, and other means of health promoted, it is hoped that the general condition of the inhabitants will be improved, and the poor's-rate reduced.

The beautiful walks and scenery around Morpeth almost render such a thing as a public park unnecessary.

Report to the local Council of the Committee of Education.

“THE Council having intrusted to us the duty of promoting the instruction of the people, and of making suggestions of what might from time to time be required, it affords us infinite pleasure now to report, that those schools which were so properly established at the first appointment of the Council have answered all the expectations which were formed of them. Their doors are closed to none, either by religious distinction, or by a money payment beyond the reach of the poorest. The education they afford is useful and beneficial, and they are valued by those for whose immediate benefit they were established. So far as these schools extend they are excellent; but the Council ought not to be satisfied with them, they give the means of acquiring knowledge, but they do not afford knowledge itself. After young people leave these schools they have not sufficient facilities to apply what they have there learned in adding to their stores; there is no proper place where the young can pursue their studies, or the mature find amusement.

“During the last century an immense change has taken place in what is required for the great mass of the people; bodily labour is diminished and the devices of thought are called forth; more time is afforded for study, and the inventions of skill and the discoveries of science supply the place of manual exertion; those things which were formerly known but to a few learned recluses in the higher ranks of society are now common and *absolutely necessary* to thousands of our artisans. It is therefore our duty to do for the present time what our predecessors did for the period in which they lived. One great object of our municipal corporations, and of the guilds which they comprised, was to unite and knit together the various classes of society, to promote the trades of the master, and to give manual dexterity with society and relaxation to the workman. Let it then be our duty by mingling with the industrious classes in institutions which may be useful to all to promote the first object, and at the same time to provide means of communicating that knowledge which in a degree has superseded muscular labour, and supply amusements and recreation to fill up the evenings of the working man, and relieve the tedium of his hours of toil. It may be said we have our Mechanics' Institution, but excellent as that establishment is, it does not approach our ideas of extended utility, nor supply the necessities of the times, as its objects are too limited, its subscribers too select, and the labouring man has in this borough no place in which, for such a small *weekly* sum as he can afford to give, he may sit down in comfort to read. That institution must either be extended or superseded by another, in which there should be a large reading-room, where the daily papers and serial publications may be united with works of science. Nor would we stop here, for we feel that such of our artisans as are shut up all the day in a confined apartment long to breathe the fresh air of a summer evening, and to seek health and recreation in active exercise; for these we would provide a place where cricket might be played, and all sorts of gymnastic exercises pursued. For those who are wearied with manual labour, and when the season forbids out-door amusement, we would have a room for reading, and for in-door artisans a place where in seasonable weather they might have motion and exercise.

“The means of effecting these desirable ends are neither difficult nor expensive; the admirable and cheap publications of Chambers, Knight,

and others, may easily be procured; the great difficulty is to provide a building, and we would suggest that the house in Bridge-street, lately occupied as an inn, might be altered and adapted for a library and reading-room. At the same time we must express our opinion that it will not be sufficient to have ill-furnished and dirty rooms, the apartments must be fitted up with every attention to comfort, cleanliness, and taste; for surely if these are found to be valuable allurements to the gin palaces, they will be useful aids in encouraging men to pursuits of utility, economy, and profit. And we are convinced that a taste for cleanliness and order, with an admiration for all that is beautiful in nature and art, will be called forth and encouraged, the beneficial effects will be seen and felt in the cottage of the labourer, the workshop of the artisan, and throughout all the ramifications of society.

“ For out-door amusements we think but little expense would be necessary to fit the High Stanners for gymnastic exercises of all kinds.

“ We conclude by expressing our belief of the great necessity for, and absolute importance of, what we have here recommended, with our anxious hope that the Council will carry it into effect, and that, when they have done so, all classes, seats, and parties in the borough will unite in establishing and supporting an institution and promoting objects in which all are deeply interested, as valuable means to promote the health, advance the prosperity, elevate the moral character, and improve the intellect of the burgesses; while at the same time a mutual kindness, and good feeling, and confidence will be cultivated among the different classes of society.

“ Should this report be adopted, we shall endeavour at a future meeting to submit to the Council the means by which our propositions may be carried into effect.

“ WM. TROTTER, *Mayor*.

JAMES HOOD.

“ THOMAS JOBLING.

WILLIAM CREIGHTON.

“ THOMAS HOPPER.

“ *March 8, 1849.*”

Further Report of School Committee.

“ THE Council having adopted our former report, we have now to submit the details for carrying it into execution.

“ We recommend that the premises called the Corporation Inn be appropriated to the objects in view, for which they are in every respect suitable, as they are of ready access from all parts of the town, and will afford every requisite accommodation. The rooms on the ground-floor, if made into one apartment, will afford ample space for a library. The front room on the second floor without alterations will be a spacious reading-room; and on the third floor will be two rooms for class-rooms; besides which there will remain apartments for the residence of a person who may have the care of the establishment.

“ We trust that the Mechanics' Institution will approve of the plan now proposed. The library will afford them more space than they now have for books, for the receiving and exchanging them, and for the resort of members for conversation, without any departure from their present plan; but then in addition the members will have the use of the reading-room, where they will always find the metropolitan and local newspapers, Chambers's Journal and similar periodical publications.

This room we propose to leave open from six to ten every working day, on payment of a sum not exceeding 2*d.* per week; persons making this payment to be entitled to read *in* the room, not only the publications which will be found there, but works from the general library. No increase to be made in the sums now paid by the different classes of members. The two class-rooms to be devoted to instruction of the members of the Institution in arithmetic, geography, mechanics, drawing, and other useful branches of education.—Prizes to be given for proficiency.

“ We have next to propose that the High Stanners be devoted to gymnastic exercises of all kinds, and be levelled and adapted for that purpose.

“ And as we are of opinion that institutions are always best conducted by those who derive the immediate benefit from them, we propose to place the management of the whole in the hands of the Committee of the Mechanics’ Institution, only stipulating that one member of this Committee shall at all times be a member of that of the Institution, to afford an opportunity of making suggestions.

“ As the Council will devote to the proposed Institution a large and valuable building and about two acres of ground, and have already expended upwards of 1,900*l.* in promoting education, they cannot be expected, nor have they out of the borough fund the means of doing more, but we anticipate no difficulty in obtaining subscriptions to meet the expenses of altering and fitting up the building; and we have reason to believe when our proposals are carried out, annual subscriptions to a considerable amount will be given by those who are interested in promoting the well-being of our working classes. At the same time it is only by the exertions, zeal, and energy of those classes that the proposed Institution can be of real utility; others may stimulate, encourage and advise; but it remains with themselves to apply the opportunities afforded to them, and thereby to elevate their moral and social condition, to promote their own comforts and happiness, and advance the general interest of the community in which they live.

“ WM. TROTTER, *Mayor.*

“ JAMES HOOD,

“ WILLIAM CREIGHTON,

THOMAS HOPPER,

THOMAS JOBLING.

“ *May* 12, 1849.”

Land drainage has been very extensively carried out in the district. Circular tiles, 14 inches long and 2 inches in diameter, have been used with joint collars, and these have been laid at an average depth of 4 feet. The cost of one statute acre, so drained, has been about 5*l.*, and the value of the land has been considerably increased in all cases, never less than one-fourth, and frequently more. The cost of the tiles and collars laid down upon the land varies from 25*s.* to 30*s.* per 1,000.

They are at present made in the district. I looked over one of the tile yards at Hepscott, and found that a cheap and simple means of washing the whole of the clay used had been adopted. Without this, I was informed the tiles would be comparatively worthless. The apparatus for washing the clay consists

“ In preventing the passage of humidity, and being drier.

“ In preventing the passage of heat in summer, and the loss of heat in winter.

“ In being a security against fire if used in floors and roofs.

“ In having less unnecessary material, and being lighter for carriage to distances.

“ In being better dried, harder burned, and stronger.

“ In being more cleanly.

“ In being cheaper.”

Comparative Cost of Hollow Tiles and Solid Bricks.

Hollow tiles, 9 inches square and 2 feet each in length, will do fifteen times the quantity of work of common bricks, with about one-fifth the weight, and consequently the cost of carriage would be reduced nearly in this proportion.

	£. s. d.	£. s. d.
15,000 common bricks, at per 1,000,	1 4 0	18 0 0
1,000 hollow tiles 9 inches square, and two feet long each, say . . .	7 10 0	7 10 0
In favour of tile . . .	£10 10 0	

Hollow bricks can be used in many forms of improved construction; they may form an internal lining to stone walls, in place of timber battens, so liable to rot and decay; combined with iron, wrought or cast they may form ceilings and floors, perfectly fire-proof, and afford the best means for ventilation; or they may be used for the roofs of cattle sheds, as applied by Earl Grey at Howick, rendering the building fire-proof, free from rot, and insuring diffuse ventilation.

The following tables show the area of the several Unions in the county, the annual value of each, and the annual expenditure in poors' rates for several years:—

ABSTRACT from the GENERAL ACCOUNT of the Treasurer of the County of Northumberland.

Summary of General County Rate, 1848.

UNIONS.	No. of Township, &c.	Number of Acres.	Annual Value.	
			£.	s. d.
1. Alnwick	62	93,025	125,360	17 8
2. Belford	34	36,838	56,107	11 2
3. Bellingham	37	229,566	60,605	8 1
4. Berwick-upon-Tweed (a part)	16	43,231	70,954	8 6
5. Castle Ward	77	84,263	117,906	17 2
6. Glendale Ward	45	143,605	124,504	5 1
7. Haltwhistle	17	63,144	40,182	19 8
8. Hexham	71	163,612	162,156	14 4
9. Morpeth	72	90,427	104,862	17 11
10. Newcastle-upon-Tyne (a part)	2	1,507	8,805	0 0
11. Rothbury	71	149,908	68,517	4 0
12. Tynemouth	24	35,779	175,316	2 10
Total	528	1,134,905	1,115,280	6 5

Expenditure of the County Rate since 1830.

	£.	s.	d.
Year ending Midsummer, 1830 . . .	7,075	18	0
„ „ 1831 . . .	9,199	13	8 $\frac{3}{4}$
„ „ 1832 . . .	9,141	10	3 $\frac{1}{4}$
„ „ 1833 . . .	11,906	0	3*
„ „ 1834 . . .	6,690	17	0
„ „ 1835 . . .	9,066	12	1 $\frac{3}{4}$
„ „ 1836 . . .	7,699	0	10 $\frac{3}{4}$
„ „ 1837 . . .	7,540	14	3
„ „ 1838 . . .	8,031	1	5 $\frac{1}{2}$
„ „ 1839 . . .	7,850	6	3
„ „ 1840 . . .	9,191	3	2
„ „ 1841 . . .	7,599	11	9
„ „ 1842 . . .	7,939	7	0
„ „ 1843 . . .	9,524	17	4
„ „ 1844 . . .	9,608	2	10
„ „ 1845 . . .	8,910	1	8 †
„ „ 1846 . . .	8,509	7	1
„ „ 1847 . . .	9,830	15	0
„ „ 1848 . . .	9,588	12	8 $\frac{1}{2}$
„ „ 1849 . . .	10,478	1	11 ‡
Total . . .	£175,381	14	8 $\frac{1}{2}$
Average of 20 years . . .	£ 8,769	1	8 $\frac{3}{4}$

REMEDIAL MEASURES AND WORKS PROPOSED, WITH GENERAL REMARKS AND A SUMMARY OF RECOMMENDATIONS.—The remedial measures proposed will be as under—

- 1st. A perfect system of sewers and house drains.
- 2nd. A full supply of pure water at high-pressure.
- 3rd. A good surface pavement to all footwalks, passages, yards, and courts.
- 4th. Well formed and well cleansed streets, footwalks, and roads.
- 5th. The regular and systematic removal of all nuisances, and cleansing of streets, courts, and passages.
- 6th. The regulation of slaughter-houses.
- 7th. The licensing and inspection of common lodging-houses, so as to insure healthy ventilation; a prevention of undue overcrowding; and a proper and decent separation of the sexes.
- 8th. A full and efficient system of public lighting, and all other matters and things which are set forth in the Public Health Act, or which shall be provided for in the Order in Council or Provisional Order.

PROPOSED SEWERAGE AND DRAINAGE.—Back drainage should as much as possible be adopted, as affording the cheapest and easiest means of taking away all liquid refuse. Each house, yard,

* In this year the expenses occasioned by the strike of the pitmen amounted to 3,225*l.*

† In this year the expenses occasioned by the strike of the pitmen amounted to 678*l.* 15*s.* 3*d.*

‡ In this year the expenses occasioned by the erection of lock-up houses amounted to 830*l.*

and alley should have its appropriate drain properly trapped ; these drains should be laid at such a depth as shall perfectly drain the deepest cellar, and by introducing a common tile drain or drains into the same excavation, the foundations of the houses may be laid dry. The house and yard drains should be so laid and constructed as to be impervious to water ; they should form a continuous system of water-tight drain-tubes. Proper and sufficient means of ventilation to the drains may be afforded by inserting the down-spouts from the houses, and leaving these untrapped. The principal drains for Morpeth may commence at Buller's Green, pass down Newgate-street, through the Market-place, down Bridge-street, and across to the outlet of Cotting-Burn. These street sewers may with advantage be laid one on each side, close to the edge of the foot-walk. Intercepting sewers may be laid at the back of the streets, and the whole of the house and refuse drainage should be excluded from Cotting-Burn. A tank or tanks may be constructed at or near Walk Mill, so as to receive the refuse, that it may be applied to agricultural purposes. A portion of Old Gate may drain towards the river, and the cottages near the new gaol will have to be drained separately.

The whole sewerage and drainage of the town and district may be accomplished at a cost very much below the usual price paid for the commonest and most imperfect stone or brick sewers. Tile sewers and tile-pipe drains, which may be made in the immediate neighbourhood, will serve for the entire drainage of Morpeth and Bedlington, as both are most favourably situated ; and when the sewage refuse shall be fully applied to agricultural purposes, the income will more than pay the interest of money laid out and also the working expenses.

PROPOSED WATER SUPPLY FOR MORPETH.—The present supply of water cannot, in my opinion, be made available for the whole town, as it is at too low an elevation, and is not capable of being increased to the required quantity. By the assistance of Mr. Woodman, I have been enabled to fix upon a site, on the boundary between Benridge and Highlaw, within one mile of the town, and at an elevation above the level of the highest house in the town. There is a small brook here, and a natural valley, which may be formed at a light cost into a storage reservoir, to receive the rain fall of several hundred acres of land, as also to retain the water of several springs. Twelve inches of rainfall, impounded annually from 400 acres, will yield a daily supply of water equal to 318,191 gallons each day, or upwards of 116,000,000 annually. A supply of 20 gallons each to 4,000 persons is equal to 80,000 gallons daily, or the supply from 400 acres, at one vertical foot in depth, or 60 gallons each square yard per annum, is equal to the supply of 16,000 persons, giving to each person 20 gallons a-day. The proposed site may, therefore, be made capable of supplying the town fully, and also provide for a large increase. The district

also affords additional facilities for adding to the quantity named should such ever be required.

The pressure will be sufficient to answer all the purposes of a fire-engine, as the water may be projected from the mains over the highest house in the town.

The site of the proposed embankment is on land belonging to the Earl of Carlisle. The reservoir would cover a portion of land belonging to his Lordship, and a portion belonging to Wm. Ord, Esq., M.P.

The necessary works may be extremely simple in character, and can be cheaply constructed.

ANALYSIS.—A sample of this water, but principally the spring-water, was submitted for analysis to Dr. Lyon Playfair, and he found it was in *hardness* 11° 00.

ESTIMATES.—MORPETH.

Water Supply for Morpeth.

	£.	s.	d.
Proposed expenditure	2,500	0	0
Income:—			
House supply	250	0	0
Large consumers	100	0	0
	<u>£350</u>	<u>0</u>	<u>0</u>
Working expenses:—			
Working expenses, management, &c.	100	0	0

Sewerage.

Mains complete	1,000	0	0
Sub-mains and branches complete	400	0	0
Gulley grates and traps	50	0	0
Manure tanks and pumps	50	0	0
	<u>1,500</u>	<u>0</u>	<u>0</u>
Contingencies	100	0	0
	<u>£1,600</u>	<u>0</u>	<u>0</u>

ABSTRACT OF EXPENDITURE AND INCOME.

<i>Expenditure.</i>			<i>Income.</i>		
	£.	s. d.		£.	s. d.
Water-works	2,500	0 0	Water-works	350	0 0
Sewerage, &c.	1,600	0 0	Deduct working expenses	100	0 0
Total	<u>£4,100</u>	<u>0 0</u>	Net income	250	0 0
Annual interest upon 4,100 <i>l.</i> , at 5 per cent.				205	0 0
			Balance	<u>£45</u>	<u>0 0</u>

	£.	s.	d.
Annual instalment to provide a fund to maintain the works and pay off the debt in thirty years	100	0	0
Deduct balance	45	0	0
To be provided by a public sewer rate	£55	0	0

BEDLINGTON ESTIMATE.

Sewerage.

	£.	s.	d.
Mains complete	800	0	0
Sub-mains and branches	300	0	0
Gulley grates and traps	40	0	0
	1,140	0	0
Contingencies	60	0	0
	£1,200	0	0

ABSTRACT OF EXPENDITURE AND RATE.

<i>Expenditure.</i>	£.	s.	d.	<i>Income.</i>	£.	s.	d.
Sewerage, &c.	1,200	0	0	½ <i>d.</i> per week on 700 houses is per annum	81	13	0
Annual interest upon 1,200 <i>l.</i> at 5 per cent.					60	0	0
					£21 13 0		

Annual instalment to provide a fund to maintain the works and pay off the debt in thirty years	33	0	0
Deduct balance	21	13	0

Additional sum to be provided by rate £11 7 0
 Or an annual payment of three shillings from each house will provide a rate adequate to the formation and maintenance of public sewers and drains for the town, independent of any advantage to be derived from the refuse.

Private improvements will be executed under an instructed and superior management by combining the whole district, as a person of experience and professional education can be paid more cheaply by the whole parliamentary borough than each township or parish could afford singly to an inferior person. To furnish private drains and a cheap water-closet to each cottage, will not cost generally more than 3*l.*; but where privies exist, they may be fitted up with a cheap form of closet-pan for 10*s.*, so that a private improvement rate of 1*d.* per week from each house will pay the cost of a perfect drainage and water-closet.

WATER SUPPLY TO BEDLINGTON.—I have not been able for want of time to give that attention necessary to mature a scheme of water supply for Bedlington. The village occupies some of the

highest land in the district, so that it is most probable pumping must be resorted to. This may easily be accomplished, as the river Blythe passes one end of the town; and I would strongly recommend that a supply of water and gas should be taken into the consideration of the Local Board, as soon as may be convenient, after they have been formed.

MANAGEMENT OF WORKS.—To insure unity of action and economy, the whole of the sanitary works should be under one management, so that one set of offices and officers will perform the entire work. The servants of one establishment will serve for all purposes connected with the local management of the works during their progress, and their maintenance afterwards.

BOUNDARIES FOR THE PURPOSES OF THE ACT.—I beg respectfully to propose, that the entire parliamentary borough be included under the management of one local board.

Constitution of Local Board.

Members appointed by the town council of Morpeth	6
Part of Morpeth parish in the district, but not within the municipal boundaries	3
Bedlington	3
Total	12

The qualification to be the same as for the Morpeth town council, namely, an assessment of not less than 15*l.* annually to the poor.

The annual time of election for the municipal borough, the 9th of November, and for the out district, the 10th of November.

The vicar to be the first returning officer.

It may be necessary to incorporate with the Public Health Act such of the existing bye-laws as may be found advantageous and in accordance with the spirit of the Act; as also to provide that the same person may perform police duties, and be also inspector of nuisances.

That the surveyor shall be surveyor for the whole district, having charge and management of all sewers, drains, water-works, roads, streets, courts, and yards, which may be vested in the powers of the Local Board.

SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS.—Having fully examined the parliamentary borough of Morpeth, I beg respectfully to lay the following summary before the General Board of Health for their consideration:—

1. That the Borough of Morpeth is not so healthy as it may be, on account of ill-paved streets, imperfect privy accommodation, badly constructed and undrained streets, crowded courts, houses, and large exposed middens and cesspools.

2. That excess of disease has been distinctly traced to the un-

drained and crowded districts; to deficient ventilation, and to the absence of a full water supply, and of sewers and drains generally.

3. That a better supply of water should therefore be provided, and that a perfect system of sewers and drains should be laid down.

4. That the condition of the inhabitants would be improved, their comforts increased, and the rates reduced—

1. By a perfect system of street, court, yard, and house-drainage.

2. By a constant and cheap supply of pure water under pressure, laid on to every house and yard, to the entire superseding of all local wells and pumps, which are proved to be expensive.

3. By the substitution of water-closets or soil-pan apparatus (for the more expensive existing privies and cesspools), and by a regular and systematic removal of all solid refuse at short intervals.

4. By properly paved courts and passages, and by a regular system of washing and cleansing all courts, passages, foot-paths, and surface-channels.

5. That these improvements may be realized for the estimates given, and, if managed with economy, may be made not only self-supporting, but a source of income.

6. That from the character of the soil in the neighbourhood of the town, sewage manure may be applied to the agricultural land, with advantage, so as to increase its value to the farmer, and yield an income for the benefit and improvement of the town.

7. That the direct charges stated will be the means of a direct and indirect saving to the inhabitants generally, but to the labouring man especially, of many times the amount to be paid.

8. That the outlay will not be burthensome or oppressive to any class of the community, as the capital required may be raised by loan, and the interest upon it reduced to an annual or weekly rent-charge.

The Public Health Act is, therefore, not only necessary, but it will be of the greatest advantage to the rate-payers generally; and with the exception of sections 50 and 96, may be applied at the earliest period to the entire parliamentary borough.

I have the honour to be,

My Lords and Gentlemen,

Your obedient servant,

ROBERT RAWLINSON.

The General Board of Health,
 &c. &c. &c.

APPENDIX.

SINCE the inquiry took place, cholera has broken out in Bedlington. It commenced on the 2nd of November, and the last death recorded up to this date, December 10th, took place on the 27th November. Twenty-seven deaths having taken place from cholera in twenty-five days, out of a population of about 2,500. The disease has principally been confined to three districts: Mugger's Corner, The Old Hall, and Church Row. These places are without drainage, and are in general crowded with a vagrant population. The houses and room tenements are without any proper water supply or privy convenience; they are consequently dirty within, and are surrounded with dirt externally. Many of the room tenements were overcrowded, and the means of ventilation are most imperfect. The constable of Morpeth has made an inspection of these tenements and houses since the outbreak, and states that, "John Taylor, aged 57, died November 21st; occupied two rooms, which were very clean, but there is a sink near the door in a foul and dirty state."

This case proves that individual cleanliness does not avail if the house or room is surrounded with filth. It is frequently most painful to see persons of cleanly habits striving against filth over which they have no control.

"E. Taylor, female, aged 30, died November 25th; occupied a room tenement. Two other persons were attacked in this house, but recovered. A drain runs through the passage of this house from behind, and is very foul."

The Inspector speaks of a back yard common to several tenements, where cholera deaths occurred, as being "small, and very much confined, and like all other yards connected with room tenements. It was everybody's business to keep it clean, and consequently no one ever touched it." This is the root of the evil; single individuals cannot keep their own particular premises clean, neither can a section of the village keep the whole village clean. Properly constructed drains will, without trouble, remove the rain-fall and liquid soil, and public scavenging alone will be efficient to remove the solid refuse; and this may be done by a properly regulated establishment, at the least expense to individuals, and consequently to the ratepayers generally. In 25 days this outbreak of cholera has cost the parish and Union several hundred pounds in attendance upon the sick, burial of the dead, besides a permanent legacy of widowhood and orphanage which is left to the parish; there has also been much expense incurred in temporarily cleansing, fumigating, &c. It will be found in the general evidence embodied in the Report, that fever is seldom absent from the places which have been visited with cholera, and the common expenditure of the relieving officer is from 200*l.* to 300*l.* each quarter, or an annual expenditure from 1,000*l.* to 1,200*l.* To this must be added the extra expense incurred by the late terrible outbreak. It will be found that permanent works of drainage, &c., will be the cheapest.